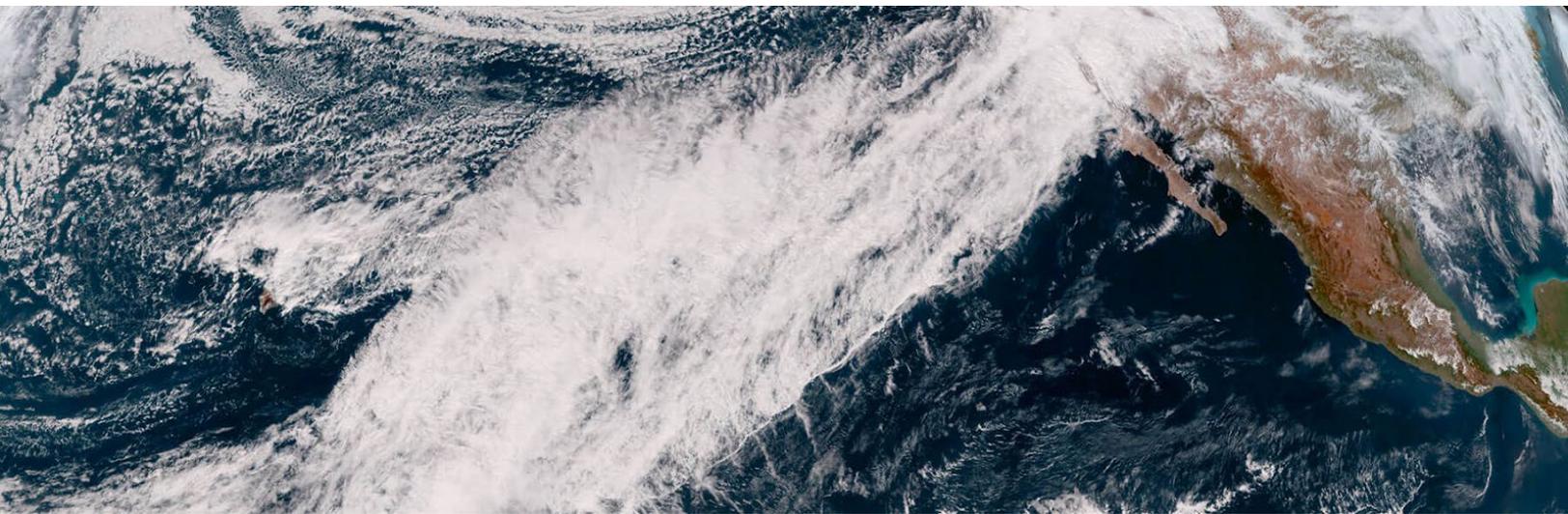


Climate Action Governance: Lessons from California



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Executive Summary

Within twenty years, land use across the State of California will change dramatically. For example, the Sustainable Groundwater Management Act will result in the transition of between 500,000 and 1 million acres of land from irrigated agricultural production to other uses by 2040.¹ By 2045, California must also figure out how to achieve 100% of electricity sales through renewable, zero-carbon sources of power generation.² In addition, a plethora of state laws require local governments to develop climate adaptation and resilience strategies, consider the needs of disadvantaged and unincorporated communities and the adequacy of local infrastructure, and integrate environmental justice throughout General Plans.³

Through a collision of state laws, policies, and programs, California recommends, mandates, and signals how local governments should achieve climate mitigation, adaptation, and environmental justice outcomes. However, the governance regimes established by the state to address issues such as climate policy, environmental justice, energy systems, groundwater management, and community resilience lack coordination and careful harmonization with local land use decision-making. Many local governments, land use law and policy scholars, and community organizations have made this clear for decades. For example, the California Environmental Protection Agency's (CalEPA) first Strategic Vision (2000) promised to “assist local land use authorities in developing local land use ordinances.”⁴ A California Air Resources Board (CARB) policy statement (2001) promised to “work with local land use agencies to develop ways to assess, consider, and reduce cumulative emissions, exposures, and health risks via General Plans, permitting, and other local actions.”⁵

A quarter century later, through interviews with local, regional, and state agency and elected officials; community organizations; industry leaders and consultants; and experts in city management and planning, organizational performance, and public participation, we chart the principal barriers to achieving such lofty goals. Through a state-funded grant, we researched the relationship between state climate policy and local authorities. *Climate Action Governance* includes findings developed from semi-structured interviews (n=63, 1.0 – 2.0 hours per interview) with key informants from the San Joaquin Valley and Southern California, supplemented by content analysis of public documents, legal analysis, and feedback during a policy design workshop (25 participants) held at the UC California Student and Policy Center in Sacramento, California.

We identified three cross-cutting themes that pervade local climate action planning: (1) insufficient state regulatory directives; (2) limited state financial, human, data, and planning support, leading to limited knowledge, resources, and infrastructure among local governments to advance state goals for managing climate change and its impacts; and (3) insufficient state guidance on how to engage in climate action planning in order to achieve effective, efficient, and equitable outcomes. In addition, local jurisdictions are beset by institutional dynamics, outlined below, that further frustrate climate

¹ Vicky Espinoza, Leigh A. Bernacchi, Max Eriksson et al., *From Fallow Ground to Common Ground: Perspectives on Future Land Uses in the San Joaquin Valley under Sustainable Groundwater Management*, 333 J. OF ENVTL. MGMT. (2023): 117226.

² *SB 100 Joint Agency Report*, CALIFORNIA ENERGY COMMISSION (June 2024), <https://www.energy.ca.gov/sb100>.

³ See e.g., Cal. Gov't. Code § 65302(h)(1).

⁴ *Strategic Vision*, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (July 2000).

⁵ *Policies and Actions for Environmental Justice*, CALIFORNIA AIR RESOURCES BOARD (Dec. 13, 2001), <https://ww2.arb.ca.gov/sites/default/files/2023-01/ejpolices.pdf>.

action planning. This report is organized across four governance challenges for local climate action planning.

- 1. First, plan development is limited due to overlapping, conflicting, and uncoordinated authority.** State requirements and policy signals are at cross-purposes; unattuned to regions, rural jurisdictions, and disadvantaged and unincorporated communities as well as jurisdiction-specific land use and zoning policies and practices; poorly coordinated with regards to planning process and equity and environmental justice approaches; cabined by lack of local government power; and avoided by jurisdictions to sidestep difficult tradeoffs.
- 2. Second, plan development is beset by data generation, dissemination, and analysis limits.** Local governments struggle with a lack of consistent data sources; limited capabilities to develop new data sets; resource constraints for ground truthing data; self-limiting data portals and dashboards; a paucity of data to consider indoor and outdoor workplace hazards; and inadequate leveraging of schools to promote data generation and dissemination, particularly to linguistically isolated communities.
- 3. Third, local governments face severe challenges of post-approval CAP implementation.** They face sequencing challenges in implementing publicly approved CAPs, which some seek to manage through parallel (and sometimes problematic) “internal CAPs”; prioritize actions over monitoring; face costs of full plan implementation that far exceed available funding; are hindered by workforce development demands; engage in limited interlocal and regional coordination; and respond in an ad hoc fashion to funding opportunities with burdensome timelines and requirements.
- 4. Fourth, CAP development and implementation raise significant procedural and substantive justice challenges that limit plan effectiveness.** Approaches to “meaningful involvement” vary widely but are consistently below best practices. Community engagement remains largely absent from later stages of CAP development and implementation. Prioritization and tailoring climate actions to local conditions introduce new challenges for community engagement. Overreliance on consultants and underreliance on community organizations and other parties persist. Despite progress, environmental justice metrics and indicators remain in limited use.

These dynamics are of great concern, as municipal planning is a crucial frontier in U.S. climate policy. Local land use authority affects over 70% of our nation’s carbon emissions.⁶ The importance of local planning – particularly via development of Climate Action Plans (CAPs) – a primary means by which governments formalize strategies to reduce carbon emissions, adapt to hazards, and shore up community resilience in the face of those hazards – will continue to grow in the coming decades, as local action becomes a principal strategy to manage climate change.⁷ As climate action plans produce benefits and burdens, reorganize space, and affect infrastructure, they have profound implications for health and safety, quality of life, and ensuring a “just transition.”⁸

⁶ Maureen Hartwell, *Local Climate Action Planning – The Land Use Perspective*, 35 ENVTL. CLAIMS J. 349, 350 (2023). See also Sarah J. Adams, *Land Use Localism and the Climate Resilience Paradox*, 36 STANFORD L. & POL’Y REV. 47, 75-82 (2025).

⁷ Climate Resilient Development Pathways, Sixth Assessment Report: Impacts, Adaptation, and Vulnerability, INTERGOV. PANEL ON CLIMATE CHANGE (Feb. 2022), <https://www.ipcc.ch/report/ar6/wg2/chapter/chapter-18/>.

⁸ Xinxin Wang & Kevin Lo, *Just Transition: A Conceptual Review*, 82 ENERGY RES. & SOC. SCI. 102291 (2021).

Through analysis of interviewees and feedback from planners and community leaders (hereinafter “workshop participants”), we developed a roadmap to increase the level of ambition and performance of local climate action. These recommendations do not call for a simple infusion of funds or blanket changes in legal authority. Rather, they derive from our research’s fundamental finding: that ***the three key capacities of state and local shared authority have yet to be realized in climate action planning***: (1) development of flexible and tailored local policies directed at achieving baseline standards of public health and safety; (2) leveraging more centralized infrastructure to overcome financial, technological, and other barriers to policymaking; and (3) cultivation of data sharing, learning, and continuous improvement across levels of governance.⁹ Among other necessary steps, we recommend further exploration of the following potential actions:

To address overlapping, conflicting, and uncoordinated authority:

1. Provide state guidance to local governments to resolve conflicts in CAP priorities.
2. Reform California Public Utilities Commission practices to encourage renewable energy infrastructure and accessibility.
3. Electrify state building codes to address overlapping, conflicted, and uncoordinated planning priorities.
4. Reform groundwater policy to address overlapping, conflicted, and uncoordinated planning priorities.
5. Update California Environmental Quality Act (CEQA) rules to address overlapping, conflicted, and uncoordinated planning priorities.
6. Encourage flexibility in CAPs to combat one-size-fits-all approaches while ensuring rigor by maintaining statewide standards.
7. Streamline climate-related planning documents and timelines to address overlapping and poorly coordinated planning processes.
8. Reform local option sales taxes to support green projects and overcome overlapping and poorly coordinated CAPs.

To address data and implementation challenges:

9. Create standardized greenhouse gas (GHG) emissions inventories to support local governments and overcome overlapping and poorly coordinated CAPs.
10. Provide technical guidance on ground truthing as well as creation and maintenance of data portals to ensure that data accurately reflect community experience.
11. Increase agency staff, raise fines, train employers, and provide public know-your-rights education to improve enforcement of indoor and outdoor extreme heat occupational regulations.
12. Encourage collaboration with public schools to reach linguistically isolated communities.
13. Create internal CAP implementation and monitoring tools to assist local jurisdictions in CAP enactment and disclosure.
14. Ensure that funding is easy to access and maintain, attuned to post-approval CAP implementation challenges and the full cost of plan implementation, and equity centered.
15. Scale up training for planners and those in green technology fields to ensure high-quality CAPs and environmental justice provisions in General Plans are created and can be implemented.

⁹ See e.g., Dan A. Farber, *Issues of Scale in Climate Governance*, in OXFORD HANDBOOK OF CLIMATE CHANGE AND SOCIETY 479-489 (2011); ALEJANDRO E. CAMACHO & ROBERT L. GLICKSMAN, REORGANIZING GOVERNMENT: A FUNCTIONAL AND DIMENSIONAL FRAMEWORK 31-52 (2019).

16. Support climate collaboratives to monitor CAP implementation, support workforce development, and overcome interlocal and regional coordination challenges.

To address environmental justice challenges:

17. Ensure use of best practices for “meaningful involvement” as well as community engagement in later CAP development and implementation stages.
18. Require tailoring of climate actions to unique concerns of disadvantaged communities, and provide guidance for the productive use of community-generated data.
19. Create environmental justice and equity metrics and indicators that encourage local jurisdictions to monitor and improve environmental justice policies.

Many of these recommendations would induce local governments to coordinate in the implementation of state standards through a variety of existing forums for intergovernmental cooperation.¹⁰ Such strategies would work well in concert with tailored state standards that enable localities to retain primary authority over most governmental functions, “thereby potentially realizing many of the benefits of decentralization while mitigating its most pernicious regional costs.”¹¹ Undoubtedly, additional steps could be taken to ensure that California achieves these goals, some of which are already laid out in statute.¹² To that end, further robust discussion and debate among state agencies, members of the California State Legislature and their staff, regional and local organizations and interested parties, and the public, is critical to ensure that climate action is advanced for and with the input of all Californians.

Introduction: Climate Action Planning

Climate Action Plans

Integrated and Equitable Climate Action (IECA) focuses on Climate Action Plans (CAPs), a primary means by which governments formalize strategies to reduce carbon emissions.¹³ CAPs are typically prepared by counties, cities, and towns using the following planning framework: (1) calculate baseline GHG emissions, (2) set goals for reducing emissions and/or adapting to climate hazards, (3) select among dozens if not hundreds of strategies to accomplish these goals, (4) implement strategies, and (5) monitor and evaluate results.¹⁴ Through this process, local governments outline their strategies to reduce GHG emissions, increase renewable energy use, improve energy efficiency, and adapt to the impacts of climate change across a wide range of land uses.

CAPs are in part a response to California’s landmark legislation, AB 32, also known as the Global Warming Solutions Act of 2006.¹⁵ Through AB 32, California set statewide targets to reduce GHG

¹⁰ Alejandro E. Camacho & Nicholas J. Marantz, *Beyond Preemption, Toward Metropolitan Governance*, 39 STAN. ENVTL. L.J. 125, 129 (2020).

¹¹ *Id.*

¹² See e.g., *Inter-Agency Environmental Justice Strategy*, CAL. ENVTL. PROT. AGENCY 2 (Aug. 2004) (describing statutory duties for “each of CalEPA’s [boards, departments, and offices] under Public Resources Code Sections 71110-71113 including the requirement to “Develop an agency-wide strategy for identifying and addressing any gaps in existing programs, policies, or activities that may impede the achievement of environmental justice”).

¹³ *Climate Action Plans*, INSTITUTE FOR LOCAL GOVERNMENT, <https://www.ca-ilg.org/climate-action-plans>.

¹⁴ Susan M. Bradford, *Vertical Consistency in the Climate Change Context*, 12 GOLDEN GATE UNIV. ENVTL. L.J. 107, 115 (2020).

¹⁵ Cal. Global Warming Solutions Act of 2006, ch. 488 (A.B. 32) (codified at Cal. Health & Safety Code § 38500 et seq.).

emissions to 80% below 1990 levels by 2050. Other laws, such as SB 375 (Sustainable Communities and Climate Protection Act of 2008) were interpreted by local governments as requiring CAPs and substantial emissions reductions.¹⁶ In addition, agencies such as CARB encourage local governments to be consistent with or exceed statewide climate goals.¹⁷

The result? Within ten years, roughly one third of California’s 483 municipalities adopted their own CAP.¹⁸ Municipal planning is a leading frontier in U.S. climate policy. This makes sense – local land use authority affects over 70% of our nation’s carbon emissions.¹⁹ The importance of CAPs will only grow over the next twenty years as local action becomes a principal strategy to manage climate change.²⁰

Across the U.S., thirty-two states and the District of Columbia adopted a state Climate Action Plan as of 2024.²¹ An additional sixteen states released a Priority Climate Action Plan, largely due to the Climate Pollution Reduction Grant (CPRG) program established under the Inflation Reduction Act.²² Certain states also encourage or mandate climate action planning at the local level. For example, states such as Maine, New Jersey, and Rhode Island suggest including climate change considerations in planning documents.²³ Washington State requires comprehensive planning documents to include a climate element under their Growth Management Act.²⁴ Similarly, California requires the inclusion of climate adaptation and resiliency strategies within General Plans but does not mandate a CAP.²⁵

While a CAP is not legally required, many Californian cities and counties have adopted one. In California, “281 of California’s cities and 36 of California’s 58 counties have Climate Action Plans (CAP), covering 79% of the population” of the state as of 2023.²⁶ Despite the creation and adoption of CAPs across California, executing these plans remains an underdeveloped area of consideration. Barriers to effective climate action include lack of standards to ensure plan adequacy and effectiveness at achieving state goals, funding, staff capacity, expertise and technical assistance,

¹⁶ Sust. Communities and Climate Protection Act of 2008, ch. 728 (S.B. 375) (codified at Cal. Govt. Code § 65080(b)(2)(A)).

¹⁷ *California Environmental Quality Act and General Planning: Climate Change*, CALIFORNIA DEPARTMENT OF JUSTICE (2025), <https://oag.ca.gov/environment/ceqa/planning>.

¹⁸ Rui Wang, *Adopting Local Climate Policies: What Have California Cities Done and Why?*, 49(4) URBAN AFF. REV. 593, 606 (2012). For the threat of legal action encouraging adoption of CAPs, see Hillary Angelo, Key MacFarlane, & James Sirigotis, *The Challenge of Equity in California’s Municipal Climate Action Plans* (Apr. 2020), https://transform.ucsc.edu/wp-content/uploads/2020/05/Angelo_Equity_Climate_Report.pdf.

¹⁹ Hartwell, *Local Climate Action Planning*, *supra* n. 6, at 350.

²⁰ *Climate Resilient Development Pathways, Sixth Assessment Report: Impacts, Adaptation, and Vulnerability*, *supra* n. 7.

²¹ *U.S. State Climate Action Plans*, CENTER FOR CLIMATE & ENERGY SOLUTIONS, www.c2es.org/document/climate-action-plans/.

²² *See id.*

²³ 2022 Survey of State Planning Laws: Land Use, Hazard Mitigation, and Climate Action, AMERICAN PLANNING ASSOCIATION (Sep. 26, 2022), <https://storymaps.arcgis.com/stories/142eec1ae7fe42be915b6767ac811e40>.

²⁴ *Climate Planning*, WASH. STATE DEPT. OF COMMERCE (JULY 2025), <https://www.commerce.wa.gov/growth-management/climate-planning/>.

²⁵ Land Use: General Plan: Safety Element, ch. 608 (S.B. 379) (codified at Cal. Gov. Code § 65302 et seq).

²⁶ Angie Hacker, *Revving Up Local Climate Action*, CIVICWELL (June 2, 2023), <https://civicwell.org/civic-news/currents-revving-up-local-climate-action-10/>.

partnerships, and political will.²⁷ These common constraints ignore a series of governance dynamics that are equally if not more relevant to ensure effective local climate action.

The Existing Literature on Climate Action Plans

For the foreseeable future, federal leadership on climate change will remain uncertain at best.²⁸ And statewide climate goals cannot be achieved without the support of local stakeholders. Therefore, a more comprehensive understanding of climate action as it is implemented at the local level is necessary. Otherwise, cities and counties will continue to pursue disparate goals, including but not limited to a just transition, with a paucity of guidance.

Unfortunately, the current role of climate action plans in furthering good governance and public participation is under-researched and not encouraging.²⁹ For example:

1. In California – the leading state in the U.S. on climate change – CAPs are adopted by less than half of the state’s cities and counties and are more likely to be adopted in wealthy, coastal regions.³⁰
2. The majority of CAPs are outdated. They only set emissions reduction targets into the 2020s. They do not account for more recent state climate commitments such as carbon neutrality by 2045. They will need to be revised to align local climate policy with these goals.³¹
3. To prepare CAPs, many jurisdictions hire the same consulting firms to draft plans that are relatively inaccessible to the public for their input (e.g., a handful of listening sessions). As a result, established organizations play an outsized role in outreach, to the detriment of the broader public.³²
4. Yet evidence-based climate action planning is not sufficiently prevalent; CAPs frequently just restate targets found in regional or General Plans, target municipal operations that are safely within existing jurisdictional powers but account for 1-5% of community emissions, ignore industrial emissions (1% of strategies apply to such sources), and ignore consumption-based approaches that include emissions from goods and services produced and consumed within a jurisdiction.³³

²⁷ Louise Bedsworth et al., *Getting to Implementation: The Status of Local Climate Action in California*, UC BERKELEY LAW, THE CENTER FOR LAW, ENERGY, AND THE ENVIRONMENT (CLEE), INSTITUTE FOR LOCAL GOVERNMENT (Nov. 2023), https://www.law.berkeley.edu/wp-content/uploads/2023/10/Report_Getting_to_Implementation_Local_Climate_Action_Nov_2023.pdf, at 34.

²⁸ Kiley Price, *As Trump Administration Purges Climate Data and Web Pages, Research Groups Scramble to Save Information*, INSIDE CLIMATE NEWS (Feb. 4, 2025), <https://insideclimatenews.org/news/04022025/todays-climate-trump-climate-data-purge-archive/>.

²⁹ S. Meerow & S.C. Woodruff, *Seven Principles of Strong Climate Action Planning*, 86(1) J. OF THE AMER. PLAN. ASSOC. 39 (2020).

³⁰ Wang & Lo, *Just Transition*, *supra* n. 8, at 606.

³¹ Dacosta Aboagye & Ayyoob Sharifi, *Urban Climate Adaptation and Mitigation Action Plans: A Critical Review*, 189 RENEWABLE & SUSTAINABLE ENERGY REV. 113886 (2024).

³² MICHAEL R. BOSWELL, ADRIENNE I. GREVE, & TAMMY L. SEALE, LOCAL CLIMATE ACTION PLANNING (2012).

³³ H. Angelo et al., *Missing the Housing for the Trees: Equity in Urban Climate Planning*, 44(3) J. OF PLAN. EDU. & RES. 1415 (2022); Matthew Cohen et al., *A Review of U.S. City Climate Action Plans*, 178 CLIMATIC CHANGE 61 (2025).

5. There is a significant time lag between CAP adoption, implementation, and evaluation. This places CAPs beyond public scrutiny. Importantly, more than three-fourths of CAPs nationwide do not include a governance structure for implementation.³⁴
6. By California law, equity must be considered as part of the CAP process, as climate actions can lead to the unequal distribution of benefits (e.g., energy and low-carbon transportation access) and burdens (e.g., pricing, green gentrification).³⁵ Yet the discussion of equity in CAPs usually takes the form of a stated problem or goal, with little relation to actions, metrics, or residents' concerns.³⁶
7. Very few CAPs include a robust set of policy tools to ensure a just transition. "Just transition" means not only managing the decline of fossil fuel industries and protecting their workforces but also addressing policies that continue to yield health disparities (such as exclusionary zoning, redlining, and unequal access to municipal services). We can identify policies that are embedded in local plans that limit the pursuit of community health for all people.³⁷ Such policies are rarely considered during the CAP process.

Barriers to effective local climate action planning previously identified in the literature include a lack of resources, such as funding, technical resources, and staff capacity. For example, for a 2023 report, 60% of survey respondents cited a need for technical assistance to implement climate risk policies, and 55% of respondents cited a need for technical assistance in support of climate equity and environmental justice policies.³⁸ There also is a considerable literature that identifies weak planning implementation due to the absence of clear legal directives and guidance³⁹ as well as incentives to act.⁴⁰ Additionally, climate planning suffers from a lack of political will, uniformity within and across planning documents, enforcement, and sustained community engagement. These barriers contribute to ineffective plan development and implementation, including realization of climate benefits to disadvantaged and other communities. Moreover, legislation on climate policy and environmental justice planning can impose costly requirements as well as policy signals for counties, cities, towns, and disadvantaged unincorporated communities (DUCs) that do not consider the unique needs, resources, and structural identity of jurisdictions.

At the same time, the existing literature on local governance and climate action planning may give some cause for optimism:

1. While population, per capita income, and city revenue influence CAP *adoption*, they have far less influence over plan *ambition*. The level of CAP ambition is influenced by

³⁴ Silvia Rivas et al., *Drivers and Barriers for Monitoring Climate Action Plans*, 332 J. OF CLEANER PROD. 130029 (2022); *see also* Aboagye & Sharifi, *supra* n. 31, at 11.

³⁵ *See, e.g.*, Cal. Gov. Code § 11135 et seq. (2017).

³⁶ Joan Fitzgerald, *Transitioning from Urban Climate Action to Climate Equity*, 88(4) J. OF THE AMER. PLAN. ASSOC. 508 (2022).

³⁷ *See, e.g.*, Nancy Krieger et al., *Structural Racism, Historical Redlining, and Risk of Preterm Birth in New York City*, 110(7) AMER. J. OF PUBLIC HEALTH 1046 (2020).

³⁸ *See* Bedsworth et al., *Getting to Implementation*, *supra* n. 27, at 5, Table ES. 1.

³⁹ *See, e.g.*, Lawrence Susskind et al., *A Critical Assessment of Collaborative Adaptive Management in Practice*, 49 J. APPLIED ECOLOGY 47 (2011) (finding plan implementation ineffective when it lacks clear legal triggers for agency action); Eric Helmy, *Teeth for a Paper Tiger: Redressing the Deficiencies of the Recovery Provisions of the Endangered Species Act*, 30 ENV'T L. 843, 853–54 (2000) (arguing Endangered Species Act recovery planning is ineffective because such plans lack enforceability).

⁴⁰ *See* Alejandro E. Camacho, *Can Regulation Evolve? Lessons from a Study in Maladaptive Management*, 55 UCLA L. REV. 293 (2007).

collaboration among community volunteers, public servant professionals, and universities, each of which can overcome challenges such as limited funding.⁴¹

2. Few jurisdictions are aware of the full range of policy options and alternatives available to address specific challenges within a CAP process; this understanding can be produced by community-academic partnerships.⁴² Once policy options are adopted by a given county, in the form of CAP provisions and related zoning and other ordinances, the odds increase that they will be implemented by other jurisdictions.⁴³
3. Cities that consider climate change across planning, zoning, public works, and other departments achieve higher quality plans, as do cities that tailor their efforts rather than rely on national or proprietary assessment tools. Public involvement increases when policy options focus on the co-benefits of climate policy, such as public health.⁴⁴
4. Because equity presents a context-specific set of planning challenges, *authentic* participation by affected communities – where intensive forms of shared decision making (e.g., involve, collaborate) join more limited public involvement (e.g., inform, consult) – is necessary for equity to be integrated into county and local climate action plans.⁴⁵ Continued gaps between “types of equity inclusion and local needs” create opportunities for “statewide legislation to offer funding or enforcement mechanisms for local needs assessments prior to CAP development.”⁴⁶

Nonetheless, literature on how to address the barriers to effective climate action planning without further burdening local jurisdictions with unfunded and ambiguous requirements is sparse.

Questions abound:

1. How can state, regional, and local governments promote more efficient, effective, and equitable CAP development and implementation, and what are the tradeoffs of different approaches to doing so?
2. How does CAP development and implementation proceed among counties and their jurisdictions that include disadvantaged communities, and what tools might promote more equitable plan development and implementation?
3. What are the most important dynamics that support or impede CAP development and implementation (including CAP strategy identification, design, tailoring, and selection; implementation planning; monitoring and evaluation; and incorporation of new knowledge into CAP updates and revisions) within and across jurisdictions?
4. What approaches do disadvantaged communities develop – as part of or independent from formal venues – to overcome barriers during CAP development and implementation?

⁴¹ Sanya Bery & Mary Haddad, *Why Cities Adopt Ambitious Climate Action Plans*, 59(5) URBAN AFFAIRS REV. 1385 (2023).

⁴² Graham Diedrich, *Evaluating Local Climate Policy*, 3(9) PLOS CLIMATE e0000395 (2024). See also M.R. Boswell & S.G. Mason, *Regional Climate Planning and Local Outcomes in California*, in CLIMATE CHANGE IN CITIES 59 (S. Hughes, E.K. Chu, & S.G. Mason, eds.) (2018).

⁴³ Hartwell, *Local Climate Action Planning*, *supra* n. 6.

⁴⁴ Ayyoob Sharifi, *Co-benefits and Synergies Between Urban Climate Change Mitigation and Adaptation Measures: A Literature Review*, 750 SCI. OF THE TOTAL ENVT. 141642 (2021).

⁴⁵ Cheryl Simrell King et al., *The Question of Participation: Toward Authentic Public Participation in Public Administration*, 58(4) PUBLIC ADMIN. REV. 317 (1998); DAVID GODSCHALK AND DAVID ROUSE, *SUSTAINING PLACES: BEST PRACTICES FOR COMPREHENSIVE PLANS* (American Planning Association 2015).

⁴⁶ Hillary Angelo, Key MacFarlane, & James Sirigotis, *The Challenge of Equity in California’s Municipal Climate Action Plans*, UC SANTA CRUZ INSTITUTE FOR SOCIAL TRANSFORMATION (April 2020).

5. What forms of support during CAP development and implementation can assist local governments when they involve the public to consider and balance mitigation, adaptation, and community resilience in the face of climate hazards (such as extreme heat)?

IECA: Improving Assessment, Development, and Implementation of Climate Action Planning

Through a grant provided by the State of California,⁴⁷ the IECA project works to advance local climate action across the state. We accomplish our goals through community-led needs assessment with Co-PIs who are leaders of the environmental justice movement, Climate Action Inventories with evaluative metrics for hundreds of jurisdictions, the development of a California Climate Action Legal Tools document (the most comprehensive account of California state climate and environmental justice policy with a focus on implications for local climate action), a user-friendly geospatial tool, and other outputs.

With our community Co-PIs, we also gain a clearer sense of the gaps in the academic literature as well as in our own understanding of local climate action. While the peer-reviewed literature has assessed CAPs in a limited number of ways—the likelihood of adoption based on certain factors (e.g., population size); their level of ambition (e.g., emissions reduction goals); and whether a subset of CAPs include certain concepts (e.g., equity)—these studies tend to be cross-sectional and reflect only a moment in time. They are largely based on content analysis and survey data to identify broad trends and the appearance of certain approaches in documents.⁴⁸

These studies ignore the cyclical nature of the local climate action planning process. Perhaps most importantly, they neglect critical stages of public participation – (a) how the public understands, contributes to, and selects among available strategies and actions; (b) how a city or county’s understanding of available strategies and actions compares to the full suite of state laws, policies, and incentives that are available to encourage climate action; (c) how CAP strategies are implemented, if at all; and (d) to what extent CAP implementation is monitored, evaluated, and incorporated into plan revisions.

This oversight will only grow more severe as plans expire, become outdated, and fail to reflect new state ambitions – such as Executive Order B-55-18’s requirement that the state achieve carbon neutrality by 2045⁴⁹ – or conditions on the ground. To put it plainly: we are flying blind in terms of how the state, universities, non-profits, foundations, and other institutions can best support CAP development and implementation to ensure robust participation and avoid the unequal distribution CAP benefits and burdens among residents.

We define plan “development” to include all stages of the CAP process that follow initial solicitation of public involvement to gather information, discuss community goals, and identify strategies, but

⁴⁷ *Integrated and Equitable Climate Action to Advance IECA Across the State*, UC IRVINE SCHOOL OF LAW (Sept. 1, 2023), <https://news.law.uci.edu/2023/09/01/integrated-and-equitable-climate-action-awarded-1-2-million-to-advance-ieca-across-the-state/>.

⁴⁸ See, e.g., Neil Debbage et al., *Urban Climate Action Plans in the U.S.: A Textual Content Analysis and Evaluation*, 120 SUSTAINABLE CITIES & SOC’Y 106095 (2025); Sara Meerow et al., *Social Equity in Urban Resilience Planning*, 24(9) LOCAL ENVT. 793 (2019).

⁴⁹ Cal. Exec. Order No. B-55-18 (2018).

before CAP adoption. Plan development therefore includes public involvement in evaluating, choosing among, and tailoring CAP strategies and processes as well as preparing and finalizing CAPs. We define “implementation” to include all stages of the CAP process that follow initial plan adoption. Implementation therefore includes monitoring CAP implementation; evaluating CAP implementation; and, based on public understanding and organizational learning, deciding when and to what extent to revise or update a CAP.

Through evaluation of planning documents and interviews with local, regional, and state agency and elected officials, community organizations, industry leaders and consultants, and experts in city management and planning, organizational performance, and public participation, we seek to engage with and expand the existing literature to further understand the barriers and innovations in local climate action plan development and implementation. Subsequent reports will feature evaluation of local climate action and adaptation plans and General Plan updates across these two regions, geospatial analysis of environmental and climate hazards to facilitate benchmarking and comparison of climate action across jurisdictions, and issue- and jurisdiction-specific policy guidance.

Each interview included questions regarding several topics: (1) background, training, and roles served in local planning, city management, and other functions related to climate action; (2) detailed description of communities served and their unique community health, climate hazard, and other quality of life challenges; (3) General Plan elements and amendments regarding climate adaptation and mitigation as well as environmental hazards and public health; (4) sources of data and analytical approaches to achieving General Plan policies and goals as they relate to climate hazards, vulnerable communities, and sensitive populations; (5) CAP elements; (6) resources and forms of expertise vital to the creation of local CAPs; (7) monitoring, enforcement, and evaluation of CAPs and General Plan elements; (8) CAP integration and consistency with General Plan elements, regional and local plans, and state requirements; (9) public participation and community involvement in CAP development and implementation; and (10) resources and incentives available to support local climate action.

Interviews were recorded and transcribed using Otter with manual verification. Narrative construction followed standard case study protocol developed by Yin.⁵⁰ Data reduction in the form of analytic coding was used to extract evidence of the development and implementation of local climate visions, strategies, and actions. Analytic coding involves assigning labels to segments of text that represent similar phenomena, such as acts, meanings, relationships, and settings. Triangulation between primary data and secondary sources containing similar data was used where possible to ensure data accuracy.

Findings

Below we present themes that arose in the literature, government planning documents, discussions with 63 local officials and community leaders between September 2024 and March 2025, and deliberations among key stakeholders at a policy design workshop in June 2025. While these findings warrant further discussion, debate, and study, they provide vital information about the challenges of CAP development and implementation in California and potential guidelines for policymakers, scholars, and advocates to better promote effective and equitable climate planning.

⁵⁰ ROBERT K. YIN, CASE STUDY RESEARCH: DESIGN AND METHODS (6th ed. 2017).

Climate plan development is limited in effectiveness due to overlapping, conflicting, and uncoordinated authority

A complex and fragmented network of California statutes and institutions were developed to address climate change. There are many more than can be described adequately in this document. However, a few foundational laws are worth brief mention. These laws combine with long-existing state and local land use and environmental laws to create an overlapping, conflicting, and uncoordinated patchwork of local climate governance.

Mitigation. The Global Warming Solutions Act of 2006 (AB 32) required California to reduce its GHG emissions to 1990 levels by 2020.⁵¹ Importantly, the state achieved this goal four years earlier in 2016.⁵² In 2015, Governor Newsom signed an executive order to establish a goal for California to reduce its GHG emissions to 40% below 1990 levels by 2030.⁵³ The legislature subsequently codified this goal by amending the Global Warming Solutions Act via SB 32.⁵⁴ More recently, AB 1279 (2022) required the state to reduce GHG emissions to at least 85% below 1990 levels by 2045.⁵⁵ It declared the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter.⁵⁶ Net zero emissions means that the amount of GHGs released into the atmosphere equals the amount removed, while net negative emissions means that the amount of GHGs released into the atmosphere is less than the amount removed.

While GHG emissions reduction requirements do not introduce legal mandates for local governments, local governments organize around the state's GHG reduction goals through CAP and other planning documents, particularly when conducting GHG inventories and establishing local GHG emissions reduction goals and supporting policies. Of particular importance for local governments is SB 375, which was enacted to help California achieve its GHG reduction goals under AB 32.⁵⁷ SB 375's focus is on reducing GHG emissions from vehicle miles traveled. CARB is required to set regional targets for GHG emissions reduction. Then local agencies, particularly metropolitan planning organizations (MPOs), work collaboratively with CARB to achieve the emissions reduction goals through transportation and housing policies. MPOs are responsible for creating a Sustainable Communities Strategy, a growth strategy for their region that focuses on sustainable transportation and housing planning.

Renewable Energy. Aside from GHG emissions reduction, the California State Legislature passed the Clean Energy and Pollution Reduction Act (SB 350) in 2015 to set the state's renewable energy target.⁵⁸ The target was updated in 2018 by SB 100 to mandate renewable energy targets of 33% by 2020, 50% by 2026, and 60% by 2030.⁵⁹ SB 350 also requires local publicly-owned electric utilities to establish annual targets for energy efficiency savings and demand reduction—strategies to decrease the overall consumption of energy—consistent with the goals of the Public Utilities Commission. To align with state policies, local governments attempt to develop and implement policies that reduce barriers to access to solar and other renewables, energy efficiency and weatherization, and zero-emission and net-zero emission transportation, especially for low-income customers. Local governments turn to the California Energy Commission's Low-

⁵¹ Assemb. Bill 32 (2006) (enacted). For early progression of Assembly and Senate bills before the California State Legislature to encourage climate action, with a focus on mitigation and renewable energy from 2002 (S.B. 1078) to 2018 (S.B. 100), see Michael R. Boswell, 2019 Report on the State of Climate Action Plans in California, CALIFORNIA AIR RESOURCES BOARD (2019), <https://ww2.arb.ca.gov/sites/default/files/2020-03/17RD033.pdf>.

⁵² Michael D. Mastrandrea et al., *Assessing California's Progress Toward Its 2020 Greenhouse Gas Emissions Limit*, 138 ENERGY POLICY 1, 1 (2020).

⁵³ Governor's Executive Order B-30-15 (2015).

⁵⁴ Senate Bill 32 (2016) (enacted).

⁵⁵ Assemb. Bill 1279 (2022) (enacted).

⁵⁶ *Id.*

⁵⁷ Senate Bill 375 (2008) (enacted).

⁵⁸ Senate Bill 350 (2015) (enacted).

⁵⁹ Senate Bill 100 (2018) (enacted).

Income Barriers Study, Part A⁶⁰ and CARB’s Low-Income Barriers Study, Part B: Overcoming Barriers to Clean Transportation Access for Low-Income Residents⁶¹ for alignment.

Local government actions and policies hold vast potential to meet or exceed state mitigation and renewable energy targets as well as to ensure adaptation and community resilience. Despite this state climate governance network, local plans suffer from lack of state mandates, guidance, incentives, and misalignment with state policy, and tend to focus on reaffirming a jurisdiction’s existing actions.⁶² For example, in California, many older General Plans do not reference global warming, climate change, or GHG emissions.⁶³ Others mention climate change and GHG emissions but were developed and approved before climate targets were established; aggressive policies to meet them are therefore missing.⁶⁴ Some General Plans reference early state climate targets but do not include current targets.⁶⁵ General Plans are also more likely to reference state GHG emissions reduction targets while failing to include renewable energy targets.⁶⁶ Similarly, CAPs often cite some but not all of the state’s climate targets. They often fail to include current mitigation targets and leave out discussion of renewables entirely. As noted, many jurisdictions have yet to develop a Climate Action Plan.

Over the last decade, cities and counties began to commit to incorporation of equity and environmental justice within climate planning. In this context, equity is defined as “the equal and fair distribution of opportunities, resources, and environments free from climate hazards and risks regardless of individual [or] group identity or background.”⁶⁷ Under AB 1628, environmental justice is defined as “the “fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”⁶⁸ Environmental justice is entrenched in local planning by laws such as SB 1000, which requires jurisdictions with disadvantaged communities to adopt Environmental Justice Elements to “address the ‘unique or compounded health risks’ in disadvantaged communities by decreasing pollution exposure, increasing community assets, and improving overall health.”⁶⁹ Accordingly, explicitly embedding equity within climate and

⁶⁰ Cal. Energy Comm’n, Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities (2016).

⁶¹ Cal. Air Resources Board, Low-Income Barriers Study, Part B: Overcoming Barriers to Clean Transportation Access for Low-Income Residents (2018).

⁶² *Id.*

⁶³ See e.g., FRESNO COUNTY PLANNING COMMISSION, CARUTHERS COMMUNITY PLAN (1959); CITY OF BAKERSFIELD, METROPOLITAN BAKERSFIELD GENERAL PLAN (2002) (mentions climate change in updated housing element); CITY OF SHAFTER, CITY OF SHAFTER GENERAL PLAN (2005); CITY OF DOS PALOS, CITY OF DOS PALOS GENERAL PLAN (1991).

⁶⁴ See e.g., CITY OF FOWLER, CITY OF FOWLER 2040 GENERAL PLAN (2023); KINGSBURG CITY PLANNING COMMISSION AND CITY COUNCIL, COMPREHENSIVE GENERAL PLAN (1992); COUNTY OF KINGS, ARMONA COMMUNITY PLAN (2009); CITY OF AVENAL, CITY OF AVENAL GENERAL PLAN 2035 (2018).

⁶⁵ See e.g., CITY OF COALINGA, CITY OF COALINGA GENERAL PLAN 2005-2025 (2009); CITY OF FRESNO, FRESNO GENERAL PLAN (2014); CITY OF REEDLEY, THE CITY OF REEDLEY CALIFORNIA GENERAL PLAN 2030 (2014); CITY OF ARVIN, ARVIN GENERAL PLAN (2012); MADERA COUNTY, MADERA COUNTY, CA GENERAL PLAN (1995).

⁶⁶ See e.g., CITY OF COALINGA, CITY OF COALINGA GENERAL PLAN 2005-2025 (2009); CITY OF FRESNO, FRESNO GENERAL PLAN (2014); CITY OF MENDOTA, CITY OF MENDOTA GENERAL PLAN UPDATE 2005-2025 (2009); CITY OF TAFT, GENERAL PLAN (2010); TULARE COUNTY, ALLENSWORTH HAMLET PLAN 2017 (2017).

⁶⁷ *Equity in Climate Planning: Trends and Best Practices for U.S. Local Governments*, ICLEI USA (2024), https://icleiusa.org/wp-content/uploads/2024/01/Equity-in-Climate-Planning_-Trends-and-Best-Practices-for-U.S.-Local-Governments.pdf.

⁶⁸ Cal. Gov. Code § 65040.12(e)(1) (2023).

⁶⁹ *General Plan Guidelines, Chapter 4: Required Elements*, GOVERNOR’S OFFICE OF PLANNING & RESEARCH (June 2020), https://lci.ca.gov/docs/20200706-GPG_Chapter_4_EJ.pdf, at 4.

general planning frameworks, guiding decision-making, resource allocation, and implementation strategies helps ensure that climate action benefits all communities fairly. Committing to equity and environmental justice in climate planning includes acknowledging past deficits and addressing past wrongs for historically marginalized people, while facilitating opportunities in the present and future.⁷⁰ Therefore, we use the term “climate action planning” to refer to CAPs as well as climate change and environmental justice topics addressed in General Plans.⁷¹

Local jurisdictions experience a crisis of compliance under conflicting legal requirements and goals and limited resources. Local climate action planning is shaped and reformed by state laws directly (through laws that specifically address local planning processes) and indirectly (through state GHG emissions reduction and renewable energy targets) (see Appendix A for an overview). For example, SB 379 directly shapes local climate action by requiring local governments to address climate adaptation and resilience in their Safety Elements, whereas AB/SB 32 indirectly shape local climate action by creating GHG emissions reduction targets that local jurisdictions can use as guideposts. Myriad laws that shape climate action planning create policy signals that local planners consider, on top of addressing issues that are unique to their communities. Furthermore, at times, legal mandates, especially those not directly related to climate change, can conflict with climate goals. Housing, energy, and water laws are sometimes at cross purposes with climate policy and environmental justice goals.

The crisis of compliance is complicated by the fact that many local governments lack resources, including funding, staffing, and technical expertise, to address existing laws. Local jurisdictions face an extreme lack of funding to create and implement planning documents that conform to state-level climate and environmental justice requirements and policy recommendations. Producing and fulfilling plans is a costly endeavor. Updating General Plans at the county level can “cost upward of \$10 million, and large cities’ General Plans sometimes run into the millions.”⁷² Implementing plans, especially CAPs, can be even more costly. The County of San Diego estimated that implementation costs for CAP measures during the first six years would total \$236 million.⁷³ Costs are dependent on the size of the jurisdiction and extent of plan revision, and they recur with each update. California’s Office of Land Use and Climate Innovation recommends updating General Plans every ten to fifteen years and recommends updating CAPs every three to five years.⁷⁴ With each General Plan update, planning departments typically also update their zoning code. Based on a 2020 Planning Costs Guidebook by the Association of Bay Area Governments, a zoning update can cost anywhere

⁷⁰ Clara Fang et al., *Centering Equity in Climate Resilience Planning & Action: A Practitioner’s Guide*, NOAA CLIMATE-SMART COMMUNITIES SERIES 2 (2022), <https://doi.org/10.25923/765q-zp33>.

⁷¹ For the municipal role in advancing environmental justice policies, see Caroline Brinkley & Jennifer Wagner, *Who is Planning for Environmental Justice—and How?*, 90 J. AM. PLAN. ASS’N 63 (2024).

⁷² Eva Spiegel & Jane Hudson, *Why Now is a Smart Time to Consider Updating Your General Plan*, WESTERN CITY (Mar. 1, 2011), <https://www.westerncity.com/article/why-now-smart-time-consider-updating-your-general-plan>.

⁷³ *Climate Action Plan Implementation Cost Report*, COUNTY OF SAN DIEGO (Dec. 2017), <https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/cap/publicreviewdocuments/FinalPublicReviewDocs/FinalBoardDocs/H1%20CAP%20Implementation%20Cost%20Report.pdf>.

⁷⁴ See *Frequently Asked Questions*, PALMDALE2045, <https://palmdale2045.org/faqs>; see also State of California General Plan Guidelines, Chapter 8: Climate Change, GOVERNOR’S OFFICE OF PLANNING AND RESEARCH (2017), https://opr.ca.gov/docs/OPR_C8_final.pdf, at 231.

from \$10,000 to \$500,000, depending on the size of the jurisdiction and comprehensiveness of the revision.⁷⁵

In order to wade through this complicated web of requirements, jurisdictions regularly hire expensive outside consultants to assist with or entirely prepare documents. According to a 2020 report, “consultants were hired in 42% of ‘early’ CAPs (2004–2008).”⁷⁶ This number rose to 64% for “‘middle’ period CAPs (2009–2012)” and 70% for “more recent CAPs (2013–2016).”⁷⁷ CAPs were frequently “developed by the same consultants often using the same basic template.”⁷⁸ Through our review of California local planning documents, several consulting firms were repeatedly relied upon, including Rincon Consultants, Dudek, LSA Consulting, Environmental Science Associates (ESA), PlaceWorks, AECOM, and Ascent, among others. While the cost of CAPs varies based on the size of the jurisdiction and services provided, one interviewee estimated that CAPs now cost anywhere from \$200,000 to \$700,000, compared to \$75,000 to \$100,000 in the pre-2010s.⁷⁹ Depending on a jurisdiction’s size and financial resources, these rates may be prohibitive.

Planners and local officials who face a crisis of compliance are forced to choose among mandates to prioritize and where to allocate limited resources. Spending a large amount on consultants to create climate action planning documents siphons resources from other crucial government operations. However, jurisdictions that do not meet requirements can face consequences in the form of denied planning documents, lawsuits, loss of permitting authority, limited access to funding opportunities, and, in some cases, financial penalties related to the Housing Element.⁸⁰ Planning documents that are out of compliance can face costly lawsuits or be rejected by state authorities. For example, Housing Elements must be approved by California’s Housing and Community Development Department and will be rejected if they do not comply with state requirements. For jurisdictions with noncompliant plans, courts may “suspend the locality’s authority to issue building permits or grant zoning changes, variances, or subdivision map approvals” if planning documents are not in compliance with state law.⁸¹ Courts can also “fine jurisdictions up to \$100,000 per month, and if they are not paid, multiply that by a factor of six” for Housing Elements that are not in compliance. These penalties put pressure on jurisdictions that may want to comply but are unable to do so.⁸²

The dearth of resources is further challenged by continued accretion within a complex state legal landscape. Since the early 2000s, California has passed many climate laws and state agencies continue to update their rules and policy guidance.⁸³ Interviewees explained how their inability to mirror state

⁷⁵ See *Planning Costs Guidebook*, ASSOCIATION OF BAY AREA GOVERNMENTS (Sep. 2, 2020), <https://abag.ca.gov/sites/default/files/documents/2021-02/Planning%20Cost%20Guide%20Final%2009-02-2020.pdf>, at 4.

⁷⁶ Hillary Angelo, Key MacFarlane, & James Sirigotis, *The Challenge of Equity in California’s Municipal Climate Action Plans*, UC SANTA CRUZ INSTITUTE FOR SOCIAL TRANSFORMATION (April 2020), https://www.researchgate.net/profile/Key-Macfarlane/publication/341754694_The_Challenge_of_Equity_in_California's_Municipal_Climate_Action_Plans/links/5ed1dc1a299bf1c67d275c03/The-Challenge-of-Equity-in-Californias-Municipal-Climate-Action-Plans.pdf.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ Interviewee 13 on 9/30/2024, pg. 10.

⁸⁰ *Growing List of Penalties for Local Governments Failing to Meet State Housing Law*, ASSOC. OF BAY AREA GOV’TS, <https://abag.ca.gov/sites/default/files/documents/2021-06/Consequences%20of%20Non-Compliance%20with%20Housing%20Laws.pdf>.

⁸¹ *Id.*

⁸² Interviewee 11 on 9/26/2024, pg. 4-5.

⁸³ See *Legal & Policy Guidance Inventory*, UC IRVINE INTEGRATED AND EQUITABLE CLIMATE ACTION (forthcoming).

climate policy is exacerbated by the shifting legal landscape.⁸⁴ They noted that California’s legislative and regulatory framework for climate policy has become too complex and burdensome for local jurisdictions without providing the requisite resources.⁸⁵ In addition to a plethora of climate change and planning laws, local jurisdictions also consider laws that may conflict with climate planning priorities, such as housing laws, water laws, and energy regulation.

The size, diversity, and income levels of jurisdictions can exacerbate their inability to comply with or mirror state requirements. For some jurisdictions, the cost of consultants may be within their budget, while for others, consultant fees are exorbitant. Poorer jurisdictions can even face higher consultant costs due to the difficulty of engagement and outreach, introducing a dual dynamic: 1) expensive consultant fees disproportionately affect lower-income jurisdictions that typically operate under a smaller budget, and 2) such jurisdictions may face higher fees than other jurisdictions, due to the difficulty of reaching out to the public.

The other challenge for us is, you know, \$400,000 for a city like [REDACTED] is a lot of money. \$300,000, \$400,000 per city like [REDACTED], drop in the bucket. They don't even blink. The thing is that we have the same set of rules to use. And yet we're using the same consultants. Consultant fees don't go down because we're in [REDACTED]. And so, we're using the same consultants. [...] we're paying the same rates. But yet our capacity is significantly lower, and our public outreach is a little more difficult. Right? Whenever you're in an impoverished community, an indigent community, people are not getting caught up in local government. They're not responding to emails. They're not attending town hall meetings. Some of them have two jobs. They work night yard jobs, right? They work swing shifts at factories. They don't have 8 to 5 jobs. A lot of these families work on Saturdays and Sundays in the fields. And so public outreach is tough.⁸⁶

Lack of climate action ambition or performance is often not due to lack of will, but rather limited resources and a complicated and ever-changing legal landscape that additional staff or consultants must manage.

Local governments face cohesion and contextual challenges. Cohesion refers to conflicts among state level policies and objectives that can frustrate local climate action planning. Cohesion also refers to interlocal conflicts between local government policies and state policies. Contextual challenges refer to state level policy applying a “one size fits all” lens to accomplish climate policy that fails to account for California’s vast range of regions and communities. The following sections explore how such problems continue to impede local climate action planning, due to overlapping, conflicting, and uncoordinated state authorities.

Conflicting state policy signals and requirements

State climate laws can directly conflict with other legal requirements (see Appendix A for an overview). The main conflicts discussed below occur among climate change laws, California Public Utilities Commission (CPUC) structure and electrification goals, water laws, and housing. State climate laws such as AB 32, SB 32, AB 1279, and SB 375 often focus on reducing GHG emissions. One of the strategies to address emissions in California is to reduce Vehicle Miles Traveled, or

⁸⁴ Interviewee 40 on 11/13/2024, pg. 21.

⁸⁵ See e.g., Interviewee 13 on 9/30/2024, pg. 8 (“No more state laws about local planning. There are enough, there really are. There are more than enough state of California laws affecting local land use and environmental planning [...]”)

⁸⁶ Interviewee 11 on 9/26/2024, pg. 4.

VMT. State guidance notes that clustered towns “have substantial VMT benefits.”⁸⁷ However, fair housing requirements under AB 686 encourage residential development in “high resource areas.”⁸⁸ High resource areas are described as being near “education, employment, economic development,” and “other opportunities, including recreation, food and healthy environment.”⁸⁹ Ensuring housing is built near recreational areas and away from industrial uses that would degrade a healthy environment can further fair housing and environmental justice goals; however, de-clustered housing can increase VMT and therefore conflict with GHG reduction goals. Thus, state housing laws create “real, meaningful trade-offs between the location of that housing and potential climate issues, as well as access to opportunity issues.”⁹⁰ One interviewee described the conflict as follows:

Some of the ways that housing element rules have been written with affirmatively furthering fair housing [AFFH] and all the AFFH regulations with AB 686 actually push some of the housing into high resource areas which in concept is horrific. But those areas often have the highest [vehicle miles traveled], and so you've actually, you've got these two competing goals that are happening simultaneously. And in fact, in the end, you're increasing VMT by moving housing into those neighborhoods. Maybe that's a net positive for society. I think that's probably a fair statement, but also sometimes they have conflicting outcomes that don't meet state policy. So, I think sometimes policies could be better coordinated at the state level.⁹¹

Local governments will at times grapple with and make tragic choices between “fair housing and equity” and “GHG and climate” targets.⁹² Jurisdictions that focus on clustered housing near transit can benefit climate goals while frustrating fair housing requirements under laws such as AB 686.⁹³

Similarly, respondents describe the conflict between housing balance and open space. The California Density Bonus Law, which encourages developers to build affordable housing and housing for vulnerable populations, provides incentives such as reduced site development standards, modified zoning codes, approval of mixed-use zoning, and a reduction in design requirements.⁹⁴ Examples of reduced development standards include reductions in “setback, lot coverage and open space requirements.”⁹⁵ The law furthers housing goals by supporting increased development of affordable housing and housing for seniors, “foster youth, disabled veterans, homeless persons, and college students.”⁹⁶ However, it can conflict with environmental justice objectives set by laws such as SB 1000. SB 1000 requires jurisdictions to plan for reduced pollution exposure and increased amenities, such as open space, in disadvantaged communities, which can include populations most likely to utilize housing built under the Density Bonus Law.⁹⁷

⁸⁷ *Technical Advisory on Evaluating Transportation Impacts in CEQA*, GOVERNOR’S OFFICE OF PLANNING AND RESEARCH (December 2018), https://lci.ca.gov/docs/20190122-743_Technical_Advisory.pdf, at 19.

⁸⁸ *Affirmatively Furthering Fair Housing: Guidance for All Public Entities and Housing Elements*, CAL. DEP’T OF HOUSING & CMTY. DEV., https://www.hcd.ca.gov/community-development/affh/docs/affh_document_final_4-27-2021.pdf (April 2021), at 54.

⁸⁹ *Id.* at 34.

⁹⁰ Interviewee 44 on 11/20/2024, pg. 12.

⁹¹ *Id.*

⁹² Interviewee 45 on 11/25/2024, pg. 10.

⁹³ Interviewee 45 on 11/25/2024, pg. 10.

⁹⁴ Jon Goetz & Tom Sakai, *Guide to the California Density Bonus Law*, https://www.meyersnave.com/wp-content/uploads/California-Density-Bonus-Law_2021.pdf (January 2021), at 5.

⁹⁵ *Id.*

⁹⁶ *Id.* at 2.

⁹⁷ *SB 1000 Equity Toolkit: Frequently Asked Questions*, SAN BERNARDINO CNTY. TRANSP. AUTH. & SAN BERNARDINO COUNCIL OF GOV’TS (SBCOG), <https://sb1000toolkit.com/faq/>.

And another one that's really coming to a head is our housing balance and being able to create housing development in a way that doesn't sacrifice open space and green space that is accessible to the affordable housing units that we're trying to create throughout the city and in the past, through density bonus and our [Transit Oriented Communities] program. We have offered incentives that include a number of different development incentives that allow for a larger building envelope in exchange for more units, and on that menu is a reduced open space requirement [...].⁹⁸

Utilizing the California Density Bonus Law, while furthering housing goals by increasing the number of affordable housing units, can lead to reduced setbacks from pollution sources as well as reduced recreational space. This frustrates environmental justice objectives by placing low-income and vulnerable populations closer to polluting sources with less available open space. Faced with state laws that can lead to opposing outcomes, local governments try to balance housing requirements with environmental justice and climate considerations.

In addition to conflicts among housing, climate change, and environmental justice, the California Public Utilities Commission's (CPUC) structure and electrification goals can conflict with housing and water laws, including the Sustainable Groundwater Management Act (SGMA). Each state has a Public Utilities Commission (PUC) that regulates energy throughout that state. For example, the CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies in California.⁹⁹ PUCs are also responsible for “how much people pay for energy,” “how much utilities invest in different forms of energy,” and “where certain energy and transmission projects are located.”¹⁰⁰ Under the Renewable Portfolio Standard (RPS) created by SB 1078 and updated by SB 350 and SB 100, the state sets renewable energy targets for electricity retail sales. However, despite the RPS mandate, the CPUC does not always encourage renewable energy development and sometimes favors the interests of utility companies over renewable energy goals. For example, the CPUC recently cut solar credits.¹⁰¹ The turn away from renewable energy has been linked to CPUC's lax regulation and acquiescence to utility profits.¹⁰² CPUC and utility incentive structures may also discourage a transition in the energy sector:

The way that [CPUC] regulates PG&E, for example, is, we'll give you a monopoly, because we don't want a whole bunch of companies building the same poles and wires, that's inefficient. And in return we'll regulate you, and we'll give you a guaranteed return on investment for building those poles and wires because we want to give you a profit-based reason to invest in the state's infrastructure. But—and that makes sense in the fifties or sixties or seventies when you were building nuclear, coal, gas power plants. But in the current energy system, it gives utilities perverse incentive that is misaligned with the kinds of infrastructure we need to build for our transition, and because they have a fiduciary obligation to their shareholders to make money [...].¹⁰³

⁹⁸ Interviewee 30 on 10/29/2024, pg. 5.

⁹⁹ *CPUC Overview*, CAL. PUB. UTILITIES COMM'N, <https://www.cpuc.ca.gov/about-cpuc/cpuc-overview>.

¹⁰⁰ David Roberts & Charles Hua, *This New Organization Wants to Remake PUCs for the Energy Transition*, VOLTS (Sep. 11, 2024), <https://www.volts.wtf/p/this-new-organization-wants-to-remake>, at 3.

¹⁰¹ Lora Painter, *California Public Utilities Commission Plan Could Undermine Rooftop Solar, Advocates Say*, ABC10 (April 17, 2025), <https://www.abc10.com/article/news/local/california-public-utilities-commission-rooftop-solar-changes/103-2cc413ee-3dbe-4fd4-9e11-293ca9941da1>.

¹⁰² See Loretta Lynch, *Over a Century Later, California May Need Another Revolt Against its Utility Companies*, CAL MATTERS (April 23, 2025), <https://calmatters.org/commentary/2025/04/california-revolt-public-utilities-commission/>.

¹⁰³ Interviewee 39 on 11/12/2024, pg. 12.

The conflict between existing laws and the state’s renewable energy targets also concerns electric vehicle (EV) mandates. Laws such as SB 1275 call for increased use of electric vehicles; however, widespread use of EVs requires EV charging infrastructure. Strict requirements can frustrate EV infrastructure development. For example, respondents describe how after they purchased EV chargers through a pre-approved state program, the chargers were determined to be out of compliance by the Department of Weights and Measures.¹⁰⁴ Navigating such legal conflicts consumes valuable city resources and frustrates attempts by local governments to extend their time horizon for climate planning.

State climate policy may also conflict with housing and water laws. Availability of affordable housing and access to drinking water are each environmental justice issues, and water access concerns will only increase as climate change worsens drought conditions. However, state objectives to address these issues may conflict. For example, SB 221 and SB 610 require “large subdivision developments (over 500 units) to demonstrate adequate water supply” and “developments subject to the California Environmental Quality Act [to] satisfy water supply sufficiency for the next 20 years.”¹⁰⁵ Meanwhile, groundwater accessed via wells is regulated under the Sustainable Groundwater Management Act (SGMA) by local Groundwater Sustainability Agencies (GSAs). Smaller jurisdictions struggle to meet these water standards while simultaneously attempting to build housing as mandated by California’s Department of Housing and Community Development (HCD).¹⁰⁶

As local governments attempt to fulfill two or more mandates—in this case, conforming to water access laws while pursuing state housing mandates—problems arise. For example, one respondent noted pressure from HCD to build housing, despite lack of well water access in those areas and therefore not qualifying under SGMA. They explained that when they told HCD about the conflict with SGMA, staff said that they “never heard of [SGMA].”¹⁰⁷ They considered this interaction a “disconnect” and a “legislative issue where we’re writing laws that conflict, or don’t consider the impact, the overall impact [...]”¹⁰⁸ The planner was trying to fulfill HCD’s mandate for housing and SGMA’s obligations set by local GSAs; meanwhile, the organizations were not aware of each other.

In addition to conflicting state requirements and policies, lack of clear state direction on what to plan for, what to prioritize, and when to plan for it is of great concern. One respondent mentioned this with regards to CAP inventories, requesting but not receiving a template inventory from the state.¹⁰⁹ Local governments compare themselves to neighboring jurisdictions on an ad hoc basis, such that lack of state signals on inventory structure and methodology leads to false appraisals of “standard” or “best practices.”¹¹⁰ State signals would also be helpful for local jurisdictions to meet specific targets or goals. California encourages climate action through state GHG emissions reduction and renewable energy targets.¹¹¹ CAPs often cite some, but not all, of the state’s climate targets. Similarly, General Plans often do not contain up-to-date climate targets and ignore

¹⁰⁴ Interviewee 1 on 9/5/2024, pg. 15.

¹⁰⁵ Mingzhou Shen et al., *Impacts of Water-Related Building Moratoria on California’s Housing Crisis*, 101(2) LAND ECONOMICS 112023-0122R (August 21, 2024).

¹⁰⁶ *Id.*

¹⁰⁷ Interviewee 40 on 11/13/2024, pg. 21.

¹⁰⁸ *Id.*

¹⁰⁹ See Interviewee 31 on 10/30/2024, pg. 16.

¹¹⁰ Interviewee 32 on 11/4/2024, pg. 13.

¹¹¹ See Appendix A.

renewable energy targets. Jurisdictions struggle to translate climate targets to the local level. Local governments are unsure of what their responsibilities are with regards to meeting state-level goals.¹¹²

State requirements poorly tailored to regions, rural jurisdictions, DDCs/DUCs, and local land use

Laws related to climate change and environmental justice impose a one-size-fits-all approach upon a diverse range of jurisdictions. California has fifty-eight counties. Each contains cities, towns, and unincorporated communities with a range of population sizes, densities, economic sectors, and a diversity of landscapes and infrastructure. Counties and local governments also have differing financial abilities to invest in climate-related solutions, such as EVs, EV infrastructure, and building electrification. Jurisdictions differ in the types of solutions they can implement as well as their ability to implement them, based on available funding, staff capacity, and expertise. Use of a one-size-fits-all approach is an echo of federal climate policies, which “can become a vehicle that inadvertently widens racial wealth and prosperity gaps even while delivering emissions reductions.”¹¹³

Laws such as AB 32, SB 32, and AB 1279 set GHG emissions reduction and carbon neutrality targets that favor maximizing reductions without considering regional, jurisdictional, and equity differences among communities. This is evidenced through the California Air Resources Board’s Scoping Plan, which lists suggested measures to reduce GHG emissions and achieve targets for carbon neutrality. Appendix D of CARB’s 2022 Scoping Plan describes the role of local governments in reducing GHG emissions and focuses on three priority areas to address California’s largest emissions sources: transportation electrification, VMT reduction, and building decarbonization.¹¹⁴ These solutions do not work for every jurisdiction due to variance in resource capacities, densities, and existing infrastructure.

Relatedly, disadvantaged and unincorporated communities face unique issues complicated by cumulative pollution burdens and lack of infrastructure and political power. Disadvantaged Communities, or DDCs (Designated Disadvantaged Communities), face a higher pollution burden based on environmental, socioeconomic, and health data.¹¹⁵ They are designated by the California Environmental Protection Agency, based on CalEnviroScreen, a tool created by the Office of Environmental Health Hazard Assessment.¹¹⁶ CalEnviroScreen gives each census tract a score, with a higher score representing an area that faces greater pollution burdens than areas with lower scores.¹¹⁷ Unincorporated communities lack governing structures, including mayors and city councils.¹¹⁸ They must rely on county-level governments to address their issues and provide

¹¹² Interviewee 25 on 10/22/2024, pg. 10.

¹¹³ Manann Donoghoe et al., *The US Can’t Achieve Environmental Justice through One-Size-Fits-All Climate Policy*, BROOKINGS (June 1, 2023), <https://www.brookings.edu/articles/the-us-cant-achieve-environmental-justice-through-one-size-fits-all-climate-policy/>.

¹¹⁴ *2022 Scoping Plan, Appendix D: Local Actions*, CAL. AIR. RES. BD. (May 2022), <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf>, at 4.

¹¹⁵ See *About CalEnviroScreen*, OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT, <https://oehha.ca.gov/calenviroscreen/about-calenviroscreen#:~:text=CalEnviroScreen%20is%20a%20mapping%20tool,especially%20vulnerable%20to%20pollution%20effects>.

¹¹⁶ See *CHC Factsheet: Determining Disadvantaged Communities (DAC)*, CAL. AIR. RES. BD., <https://ww2.arb.ca.gov/resources/fact-sheets/chc-factsheet-determining-disadvantaged-communities-dac>.

¹¹⁷ See *About CalEnviroScreen*, *supra* n. 115.

¹¹⁸ *Who We Are*, CALIFORNIA UN(INCORPORATED) (2025), <https://www.caunincorporated.com/who-we-are>.

municipal services, yet they are often “back-burnered.”¹¹⁹ SB 244 provides definitions and requirements to identify Disadvantaged Unincorporated Communities (DUCs) in long-range planning. DUCs also lack sufficient infrastructure and public services and face complex political and financial barriers to address these issues.¹²⁰

Climate solutions designed for richer, urban areas are more difficult to apply in DDCs and DUCs. For example, CARB sets a target to reduce per capita VMT by 25% below 2019 levels by 2030 and by 30% by 2045 and prioritizes transit-oriented development (TOD), mixed-use zoning, and increasing public access to clean mobility options such as electric shuttles, bike sharing, and walking.¹²¹ DDCs and DUCs in spread out, rural areas that lack public transportation options, including sidewalks, struggle to follow these recommendations.¹²² Without tailoring recommendations to achieve climate goals to more closely align with a local government’s characteristics and abilities, climate action risks further entrenching inequities faced by DDCs and DUCs.

Varied geographies are also of primary concern to local governments. Coastal areas may grapple with rising sea levels, while areas prone to wildfires and drought plan for fire responses and water access. Inland communities near agricultural areas may be more concerned with environmental justice issues such as pesticide exposure and increased pollution from goods movement.¹²³ When asked how the state could better support climate action planning, one respondent noted:

I think the state has to make more regional laws and not statewide laws, because our state is so diverse. Even counties are diverse. I mean, we have parts of our county that are in the Sierras, and experience fires and snowfall, and parts of our county that are drought-ridden. And so that's just one county. But the state is so vast. You have your coastal communities, your inland empires, down south.¹²⁴

SB 375 is a good example of a climate policy that invites region-specific plans to address climate targets.¹²⁵ The Sustainable Communities and Climate Protection Act requires CARB to develop and set regional targets to reduce GHG emissions from vehicles.¹²⁶ It requires metropolitan planning organizations (MPOs) to develop Sustainable Communities Strategies (SCS) that guide local land use decisions.¹²⁷ Local governments that align CAPs and General Plan environmental justice elements with these mandates are more likely to secure funding from state programs, which in turn can be reinvested into climate action planning measures.¹²⁸ More generally, however, there is a lack of regional focus in state climate policy.

¹¹⁹ *Id.*

¹²⁰ Nelia Sperka, *SB 244 Technical Advisory*, GOVERNOR’S OFFICE OF PLANNING AND RESEARCH, https://lci.ca.gov/docs/SB244_Technical_Advisory.pdf.

¹²¹ *California Releases World’s First Plan to Achieve Net Zero Carbon Pollution*, GOVERNOR GAVIN NEWSOM (Nov. 16, 2022), <https://www.gov.ca.gov/2022/11/16/california-releases-worlds-first-plan-to-achieve-net-zero-carbon-pollution/>.

¹²² 2022 Scoping Plan, Appendix D, CAL. AIR. RES. BD., *supra* n. 114, at 4.

¹²³ Interviewee 22 on 10/17/2024, pg. 24.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Sustainable Communities and Climate Protection Program*, CAL. AIR RES. BD. (2025), <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about>.

¹²⁷ *Id.*

¹²⁸ *2022 Scoping Plan for Achieving Carbon Neutrality*, CAL. AIR RES. BD. (Dec. 2022), <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>, at 194.

Oftentimes when policies developed at the state level, what's lost is the uniqueness of various regions in California, and sometimes the strategies and policies that are lifted up don't necessarily work. And they might work in urban areas like, you know, the Bay Area or L.A., but are maybe less relevant for rural areas or places such as the Central Valley.¹²⁹

Obfuscating California's unique regional considerations limits the effectiveness of policies and tools that the state creates for climate action. For example, CalEnviroScreen, which is used to identify disadvantaged communities for priority policies and funding, does not always correctly identify disadvantaged communities, particularly in rural and agricultural areas.¹³⁰ Smaller, rural jurisdictions struggle to achieve emissions reductions that larger cities achieve through marginal changes. For example, larger cities can drastically reduce VMT by increasing clean mobility options such as public transportation, bike sharing, and walking. These options are not available in rural jurisdictions that lack public transportation options and are too geographically dispersed to bike or walk. Rural jurisdictions also have fewer financial resources to invest in transportation electrification. Additionally, smaller, rural communities with housing stock unfit for electrification and a lack of EV infrastructure find it difficult to conform to state policies. Urban jurisdictions employ “low-hanging fruit”¹³¹ strategies that are relatively easy to carry out and yield larger performance results – methods that are unavailable to smaller, rural communities to achieve state-required climate results.¹³²

When climate policy is geared toward realizing “a large change to [...] numbers,” smaller jurisdictions will struggle to meet reduction quotas. GHG emissions reduction targets in the near future leave jurisdictions with “all these really tiny slivers for different things that are difficult to address.”¹³³ Once “low hanging fruit” solutions are achieved, jurisdictions struggle to continue to reduce the “tiny slivers” of emissions; they are encouraged to focus on emissions reduction numbers set by state laws, rather than long-term transitions that may not provide immediate GHG reduction results, such as building code changes. In addition, unique climate change and environmental justice policy actions, such as multi-benefit land repurposing and soil rejuvenation programs, are promising as ways to improve soil, water quality, air quality, and food access, but may not result in drastic emissions reductions that state laws encourage and state-recommended policies (transportation electrification, VMT reduction, and building decarbonization) are able to achieve.

State laws further ignore variance among local governments by creating policies that are incompatible with a community's built environment and infrastructure. This dynamic often applies to housing development, building decarbonizing, Vehicle Miles Traveled (VMT), and electric vehicle adoption. As discussed above, state climate laws and CARB's Scoping Plan encourage VMT reduction, transportation electrification, and building decarbonization as key strategies to meet climate change goals. In addition to these strategies, housing development standards can support or frustrate climate goals depending on the type of jurisdiction in which they are implemented. For example, jurisdictions must meet density standards set by the Department of Housing and Community Development when they add to their housing stock. Cities and counties in metropolitan

¹²⁹ Interviewee 21 on 10/16/2021, pg. 10.

¹³⁰ *Id.* at 4.

¹³¹ Interviewee 8 on 9/24/2024, pg. 9-10.

¹³² Interviewee 17 on 10/4/2024, pg. 10; Interviewee 32 on 11/4/2024, pg. 9; Interviewee 21 on 10/16/2021, pg. 6.

¹³³ Interviewee 41 on 11/13/2024, pg. 4-5.

jurisdictions have default density standards of 30 units per acre.¹³⁴ One respondent noted that the state’s approach to standard housing density does not work for rural areas in the Central Valley, using an example of requiring 30 dwelling units per acre.¹³⁵ While urban jurisdictions may better reach climate goals through dense, clustered housing near public transportation, density standards pose challenges for rural jurisdictions that may not have the financial resources, market demand, and/or established infrastructure to support this density level.

Similarly, the current state of reach codes in California does not support climate policies for electrification and decarbonization. Jurisdictions adopt local ordinances (reach codes), which go beyond California building codes to increase electrification of buildings, reduce energy use, and lower GHG emissions. Reach codes “can be integrated as part of a city’s climate action plan, local hazard mitigation plan, climate adaptation plan, or other related planning documents.”¹³⁶ However, some jurisdictions do not have the resources to establish their own reach codes and need state level assistance to focus their building code on electrification. Jurisdictions that can create reach codes are dissuaded by the decision in *California Restaurant Association v. City of Berkeley*.¹³⁷ In this case, the City of Berkeley passed a 2019 reach code to eliminate natural gas infrastructure. The Ninth Circuit held that Berkeley had to repeal the ordinance as it was preempted by the Energy Policy and Conservation Act.¹³⁸ One respondent noted, “If they would like to make the building code all electric, that would be great. That would make my life so much easier than cities having to figure out every 3 years a new reach code.”¹³⁹ Others had to “dial back [their] actions regarding decarbonization” after *City of Berkeley*.¹⁴⁰ “I would like to see the state move faster in the building and energy codes to get us to all electric buildings, carbon neutral buildings that would take a lot of challenges away from local governments... [reach codes are] a critically important implementation component of CAPs. So, jurisdictions that had what we call a [California Environmental Quality Act, or] CEQA-qualified CAP that had to suspend their reach code are off track now.”¹⁴¹

VMT goals, electric vehicle targets, and building electrification are further divorced from jurisdiction-specific circumstances. In 2013, SB 743 changed the “main measurement to determine the negative environmental impacts of development and transportation projects” from Level of Service (LOS), relating to road use and congestion, to VMT, which measures the “amount of driving and length of trips.”¹⁴² Rural jurisdictions are disadvantaged under the new VMT policy because

¹³⁴ Megan Kirkeby, *Memorandum for Planning Directors and Interested Parties*, DEP’T OF HOUSING & CMTY. DEV., <https://www.hcd.ca.gov/community-development/housing-element/housing-element-memos/docs/defaultdensity2020censusupdate.pdf>, at 1.

¹³⁵ Interviewee 11 on 9/26/2024, pg. 6.

¹³⁶ Gabriella Medina et al., *Why Reach Codes: Local Players Driving Statewide Building Standards*, SAN DIEGO REGIONAL CLIMATE COLLABORATIVE (2023), <https://digital.sandiego.edu/cgi/viewcontent.cgi?article=1033&context=npis-climate>, at 5.

¹³⁷ 65 F.4th 1045, amended 89 F.4th 1094 (9th Cir. 2023).

¹³⁸ Kristen Driskell, *California Restaurant Association v. City of Berkeley and the Continuing Opportunities for Building Codes to Drive Deep Decarbonization and Energy Efficiency*, AMER. COUNCIL FOR AN ENERGY EFFICIENT ECONOMY (2024), https://www.aceee.org/sites/default/files/proceedings/ssb24/assets/attachments/20240722160830781_3a9a572d-0b45-45bf-a3d2-7d05e8538894.pdf.

¹³⁹ Interviewee 32 on 11/4/2024, pg. 12.

¹⁴⁰ Interviewee 39 on 11/12/2024, pg. 2.

¹⁴¹ Interviewee 13 on 9/30/2024, pg. 10.

¹⁴² *SB 743 (LOS to VMT Transition)*, METROPOLITAN TRANSP. COMM’N (2025), <https://mtc.ca.gov/planning/transportation/driving-congestion-environment/sb-743-los-vmt-transition>; see also *VMT*

their homes and businesses are more widely dispersed than in urban jurisdictions. Rural jurisdictions often have less congestion and road use than urban jurisdictions and therefore benefitted under the former LOS measurement. However, the greater distances that must be travelled to get from place to place puts them at a disadvantage with regards to VMT measurement. It is more difficult for these rural jurisdictions to meet VMT reduction goals, one of the key strategies the state uses to measure progress toward state-mandated reduction goals.¹⁴³ Additionally, the change under SB 743 from LOS to VMT included two CEQA exemptions “for infill projects that can only be used when a project will not have significant transportation/traffic impacts.”¹⁴⁴ Therefore, rural jurisdictions are also at a disadvantage for receiving CEQA exemptions that may promote development in their communities.

Along with VMT, jurisdictions face challenges when it comes to vehicle electrification and building decarbonization, including: 1) the cost of vehicle electrification, 2) existing infrastructure not suitable for decarbonization upgrades, and 3) incompatible housing and building standards, particularly surrounding density and reach codes. The cost and charging infrastructure requirements for fleet electrification make it “not doable” for jurisdictions with fewer financial resources.¹⁴⁵ Electric vehicles can cost anywhere from \$30,000 to \$100,000.¹⁴⁶ Electric buses on average cost \$352,000, compared to diesel buses “which cost less than \$100,000 on average.”¹⁴⁷ EV charging stations meant for public use can cost anywhere from \$5,500 to \$40,000 depending on voltage and charging speed.¹⁴⁸ This does not include maintenance and potential infrastructure costs, such as electrical conduit upgrades, which can cost anywhere from \$12,000 to \$15,000.¹⁴⁹ Jurisdictions with smaller budgets may not be able to afford these costly options, especially when they are forced to decide between EVs and fixing essential infrastructure such as roads and sidewalks. Another interviewee sketched out how their city’s land use differs from the characteristics of a “default jurisdiction” that state laws anticipate, due to the age of their housing stock: “We were built out during the Agricultural Revolution, not the Industrial Revolution [...] it’s really hard to electrify houses that were built – most of our housing was built before World War II.”¹⁵⁰ State law does not distinguish among these variances. Residents express their own concerns over the feasibility of decarbonization and electrification of their homes, given the frequency of power outages.¹⁵¹ In areas where power outages occur with greater regularity, reliance on electrified buildings and amenities may be a larger concern for residents than in jurisdictions with reliable power grids.

State requirements also conflict with local zoning and land use policies. This can occur when zoning laws create roadblocks for compliance with state laws, or when state laws are difficult to implement

Policy, CAL. ASS’N OF COUNCILS OF GOV’TS (April 2, 2025), [https://calcog.org/sb-743-implementation/#:~:text=SB%20743%20\(Steinberg%2C%202013\),more%20options%20to%20drive%20less.](https://calcog.org/sb-743-implementation/#:~:text=SB%20743%20(Steinberg%2C%202013),more%20options%20to%20drive%20less.)

¹⁴³ Interviewee 19 on 10/8/2024, pg. 8.

¹⁴⁴ *SB 743 Frequently Asked Questions*, CA GOVERNOR’S OFFICE OF LAND USE & CLIMATE INNOVATION, <https://lci.ca.gov/ceqa/sb-743/faq.html#impacts-ceqa>.

¹⁴⁵ Interviewee 17 on 10/4/2024, pg. 10.

¹⁴⁶ Cherise Threewitt, *How Much Do Electric Cars Cost?*, US NEWS (Sep. 19, 2024), <https://cars.usnews.com/cars-trucks/advice/electric-car-prices>.

¹⁴⁷ Beia Spiller, *Why Are Electric School Buses So Expensive?*, RESOURCES (April 22, 2024), <https://www.resources.org/common-resources/why-are-electric-school-buses-so-expensive/>.

¹⁴⁸ *How Much Do EV Charging Stations Cost?*, FUTURE ENERGY (July 1, 2021), <https://futureenergy.com/ev-charging/how-much-do-ev-charging-stations-cost/>.

¹⁴⁹ *Id.*

¹⁵⁰ Interviewee 8 on 9/24/2024, pg. 5.

¹⁵¹ Interviewee 25 on 10/22/2024, pg. 13.

due to a jurisdiction's existing zoning and utility makeup. While climate change reduction targets under laws such as AB 32, SB 32, and AB 1279 support clustered development near transportation sources to reduce GHG emissions, fair housing requirements under AB 686 and environmental justice requirements under SB 1000 support development that separates residential from industrial land uses and provides additional open space.

Zoning and municipal codes contribute to this problem. A study commissioned by CARB and CalEPA found that, “[l]ocal land use regulations, including zoning and permitting, are the largest obstacle to dense urban infill housing near transit, which would enable major reductions in GHG emissions in the transportation sector.”¹⁵² The study examined local zoning and land use policies such as permitted and restricted uses, height limitations, density and lot coverage, and parking requirements, “along with other regulations that could impact housing supply, such as ‘inclusionary housing ordinances, local referenda to generate affordable housing supply, rent stabilization ordinances, anti-demolition ordinances, and neighborhood planning [...]”¹⁵³ Respondents agreed with this assessment. For example, they described how local restrictions on Accessory Dwelling Units (ADUs) prevent further housing development. ADUs are cost-effective, affordable housing options that have less rigorous building standards than traditional housing.¹⁵⁴ While ADUs are supported by HCD to help address the housing crisis in California, local zoning laws are sometimes at odds with these solutions.¹⁵⁵

In addition to discouraging clustered, infill development, local zoning and land use policies can prevent climate and environmental justice-friendly land uses. One respondent described how local jurisdictions try to enact land use practices to support state climate goals, such as land repurposing projects and solar panel installation, that face zoning and regulatory restrictions.¹⁵⁶ While the California Solar Act restricts the ability of homeowner associations and local governments to limit solar installations, it allows for “reasonable” restrictions, a definition that expanded after a 2011 case, *Tesoro Del Valle Master HOA v. Griffin*.¹⁵⁷ The court gave solar restrictions a presumption of validity and stated that restrictions would only be overturned if they were “wholly arbitrary, violate[d] a fundamental public policy or impose[d] a burden on the use of affected land that far outweighs any benefit.”¹⁵⁸ Therefore, local jurisdictions have the ability to enact restrictive zoning that limits solar installations and affordable housing solutions such as ADUs.

Another conflict occurs between local zoning and utility laws and state priorities to support small-scale rather than industrial-scale agriculture.¹⁵⁹ California sets this priority for small agricultural operations through laws such as the Urban Agriculture Incentive Zones Act, which allows

¹⁵² O’Neill, et al., *Housing Policy is Climate Policy: How Local Zoning Regulations Hurt the Environment*, UC BERKELEY & UC IRVINE (Dec. 22, 2021), <https://cayimby.org/blog/housing-policy-is-climate-policy-how-local-zoning-regulations-hurt-the-environment/>.

¹⁵³ *Id.*

¹⁵⁴ *Accessory Dwelling Units*, CAL. DEP’T OF HOUSING & CMTY. DEV. (2025), <https://www.hcd.ca.gov/policy-and-research/accessory-dwelling-units>.

¹⁵⁵ *Id.*

¹⁵⁶ Interviewee 38 on 11/11/2024, pg. 7.

¹⁵⁷ 200 Cal.App.4th 619 (Cal. Ct. App. 2011).

¹⁵⁸ *Testing the Limits of the California Solar Act*, RENEWABLE ENERGY WORLD (April 18, 2012), <https://www.renewableenergyworld.com/solar/testing-the-limits-of-the-california-solar-act/>.

¹⁵⁹ Interviewee 34 on 11/6/2024, pg. 11.

jurisdictions or landowners to use lands for small-scale agricultural production,¹⁶⁰ and climate accountability laws, SB 253 and SB 261, which exempt small- and medium-sized businesses from GHG emissions reporting.¹⁶¹ These state laws are sometimes impeded by zoning laws that support big agricultural operations.¹⁶² For example, in urban and peri-urban areas, local laws force some farmers to pay urban water rates for farmed land.¹⁶³ Small farmers who cannot afford these rates will be unable to sustain their agricultural lands. The lands are often acquired by large agricultural operations that can afford these rates. However, larger agricultural operations may have more adverse environmental and climate change effects, including water depletion and decreased quality of air, water, and soil. One respondent highlighted the tension between state goals to support agriculture and local zoning laws:

You could think about SGMA as one case study of where you have a state level set of goals, and then the realities on the ground of how development is happening in these communities, who has access to water, water rights versus groundwater. All these things overlap to make it a potential ramification of SGMA: that big landowners get more land, and those who are looking for land get less or are less able to actually invest in that land or have secure tenure on that land.¹⁶⁴

Smaller farmers entangled in zoning laws often lose their land to larger farming operations, which can exacerbate climate change and environmental justice issues. Ensuring zoning and land use policies are aligned with state climate goals is essential to not only further local climate action but also prevent unintended consequences.

Overlapping and poorly coordinated state planning processes

Climate action planning is addressed through a variety of documents and projects that follow their own timelines, revision cycles, and prioritization. Diverse sequencing of climate actions can frustrate climate efforts as many state climate requirements necessitate urgent action and coordination across jurisdictions. As CARB's 2022 Scoping Plan explained, "California's climate trajectory relies on local efforts that align with and help implement the state's priorities."¹⁶⁵ Specifically, state laws focused on emissions reduction and renewable energy goals, each with different deadlines to achieve these targets (including AB 32, SB 32, AB 1279, and SB 350), require planning "for specific years aligned with the state's long-term climate targets."¹⁶⁶ Two notable sequencing challenges have emerged: 1) sequencing of planning documents based on different legal requirements for when and how often they should be revised, and 2) sequencing of planning actions that varies among jurisdictions and is often determined by funding availability rather than state climate objectives.

Planning documents are adopted and revised on different cycles based on statutorily set schedules, when the original plan was adopted, and, in certain cases, when jurisdictions decide to update their plans. For example, Government Code Section 65302 sets a 25-year span for General Plan goals and

¹⁶⁰ *Urban Agriculture Incentive Zones Act*, Cal. STATE BD. OF EQUALIZATION (2025), <https://www.boe.ca.gov/proptaxes/uaincentivezone.htm>.

¹⁶¹ Steven Suppan, *The Impact of California's New Climate Accountability Laws on Food and Agriculture Companies*, INST. FOR AGRIC. & TRADE POLICY (Oct. 23, 2023), <https://www.iatp.org/californias-new-climate-laws-food-agriculture-companies>.

¹⁶² Interviewee 38 on 11/11/2024, pg. 7.

¹⁶³ Interviewee 34 on 11/6/2024, pg. 11.

¹⁶⁴ *Id.* at 10-11.

¹⁶⁵ 2022 Scoping Plan, Appendix D, CAL. AIR. RES. BD., *supra* n. 114, at 35.

¹⁶⁶ *Id.* at 14.

actions, and states that Safety Elements should be reviewed every eight years.¹⁶⁷ However, some jurisdictions update their General Plans sooner, following the Governor’s Office of Land Use and Climate Innovation’s recommendation that General Plans should be comprehensively updated every 10-15 years.¹⁶⁸ Under Government Code Section 65588, Housing Elements must be updated every five to eight years on strict schedules regulated by the HCD.¹⁶⁹ In contrast, CAPs do not follow a mandated update schedule. The Office of Land Use and Climate Innovation recommends that CAPs should be updated every three to five years; however, many CAPs do not meet this recommendation, often due to lack of funding and capacity.¹⁷⁰

Furthermore, newly adopted laws sometimes necessitate individual element updates based on a specific timeline. For example, SB 379 requires jurisdictions to update their Safety Element to address climate adaptation and resilience by 2017 for those with hazard mitigation plans, and by 2022 for those without hazard mitigation plans. SB 1000 requires jurisdictions to create an Environmental Justice Element by 2018 when two or more General Plan Elements are updated. These plans are often adopted in different orders based on jurisdiction-specific circumstances, such as when they adopted the latest revision of their General Plan, when they undergo an element update, and whether they have funding and capacity to adopt or update a CAP. This leads to a patchwork of efforts across the state that is often insufficient to meet specific climate targets that provide precise deadlines.

A second sequencing issue involves prioritization of climate actions. Because many of the state-level climate targets, including AB 32, SB 32, and AB 1279, do not mandate specific climate actions and targets at the local level, jurisdictions determine their own internal prioritization processes. Their priorities are constrained by resource availability (such as funding and staff),¹⁷¹ input from advisory groups and committees, existing CAP timelines and ongoing projects, and requirements that do not provide opportunities to coordinate the sequencing of climate actions.¹⁷² One respondent recalled taking a list of priority projects to their city’s Climate Action Commission, “with how much it’s going to cost, keeping in mind how much budget we’ve been given for the fiscal year”: “And I get some direction, because any money we have to spend has to go to council, and then, once we have a general direction on which action, that will be where the community outreach [is focused].”¹⁷³

Poorly coordinated local equity and environmental justice approaches

There is also a lack of coordination in terms of how environmental justice and equity are incorporated into climate action planning. Frequently, multiple plans in a jurisdiction address climate change and environmental justice without relating to each other. Plans may be in conflict or miss opportunities to build upon each other’s strategies and projects, especially where several government departments participate in their development and implementation. Similarly, planning documents across jurisdictions that address climate change and environmental justice rely on different planning approaches. This can be explained in part by “micropolitical” struggles to advance and avoid changing the “rules of the game” of local authorities – “established routines, organizational

¹⁶⁷ Cal. Gov. Code §§ 65302(b)(2)(B)(ii)(III), 65302(g)(6) (2011).

¹⁶⁸ *Frequently Asked Questions*, PALMDALE2045, <https://palmdale2045.org/faqs>.

¹⁶⁹ Cal. Gov. Code § 65588 (2024).

¹⁷⁰ State of California General Plan Guidelines, Chapter 8: Climate Change, *supra* n. 74, at 231.

¹⁷¹ Interviewee 40 on 11/13/2024, pg. 8.

¹⁷² Interviewee 36 on 11/7/2024, pg. 7.

¹⁷³ Interviewee 32 on 11/4/2024, pg. 3.

structures, and governance mechanisms.”¹⁷⁴ It is also the result of a fragmented legal landscape. SB 379, for instance, requires California jurisdictions to address climate adaptation and resiliency strategies in General Plan Safety Elements.¹⁷⁵ Meanwhile, under SB 1000, Environmental Justice Elements are required when local governments adopt or revise two or more General Plan elements concurrently.¹⁷⁶ Such fragmentation makes it difficult for local governments to compare and evaluate environmental justice efforts:

We also worked very closely with our Environmental Sustainability Commission, had a really hard time actually trying to figure out how we wanted to incorporate equity and environmental justice into it. [...] And then it also helped us create certain relationships with community members. [...] So, what we decided to do with equity in our Climate Action Plan, we decided to openly state that we were struggling with it and not try and make a definition ourselves, have a table of different definitions that are out there, and also different tools that are available for us to utilize. And then also showcase that we used equity as a guidepost for us to create our Climate Action Plan actions and measures. And so that's how we incorporated equity because we had that lens on as we were writing everything.¹⁷⁷

At times, equity is addressed during the planning process but does not appear in the approved plan. A team may develop “equity guideposts,” or equity indicators and considerations to inform climate action planning. Approaches to equity differ widely. Common tools include use of advisory groups, public-facing dashboards to provide updates and information, and equity indicators to track current actions and measure progress. For example, one jurisdiction included an “equity appendix” which “matched equity strategies to actions” in the CAP and explained when and how each strategy advanced equity goals.¹⁷⁸ Other jurisdictions may not use equity tools in their CAPs but have Environmental Justice Elements or citizen advisory committees to address equity concerns, which can affect how equity is addressed in planning documents. One respondent explained: “We created the city’s first environmental justice committee... And we had the General Plan with 7 different environmental goals, and we asked the community to help us prioritize... There are so many things that we have to update, and there’s so many goals that we want to tackle, and we just need some direction on what the priorities are.”¹⁷⁹ A key challenge, then, lies in ensuring that local governments have sufficient flexibility to accommodate jurisdictional differences while also developing evidence-based statewide standards and coordination mechanisms that planners can use to advance equity and environmental justice goals.

Tension between state aspirations and local government power

Tension persists between state climate policies and planning and implementation authority among local legislatures. For example, state targets to reduce emissions and promote renewable energy, such as AB 32, SB 32, and AB 1279, do not mandate specific local action. Planners and city staff who do not have support from their city council or board of supervisors lack the power to address climate change. Political will was mentioned frequently as a barrier to implementing actions that accord with

¹⁷⁴ Benjamin Friedländer, *The Influence of Micropolitics in Local Climate Governance: Perspectives for Climate Research*, 4 NPJ CLIMATE ACTION 73 (2025).

¹⁷⁵ *Adaptation Planning Guide: SB 379*, RESILIENTCA.ORG (Oct. 14, 2025), <https://resilientca.org/projects/bf4c7799-3157-4cf0-ba4d-894f1ddcdf7a/>.

¹⁷⁶ See *SB 1000 Toolkit*, CAL. ENV’T JUST. ALL., <https://caleja.org/2017/09/sb-1000-toolkitrelease/#:~:text=Under%20SB%201000%2C%20cities%20and,elements%20of%20their%20General%20Plan.>

¹⁷⁷ Interviewee 36 on 11/7/2024, pg. 4-5.

¹⁷⁸ Interviewee 32 on 11/4/2024, pg. 1.

¹⁷⁹ Interviewee 17 on 10/4/2024, pg. 4.

state climate goals and policies. One respondent provided a helpful reminder that the drive to address climate change is often lacking at the local level.¹⁸⁰ Another discussed the question of adopting an Environmental Justice Element as a “political will question,”¹⁸¹ while another portrayed “a disconnect between what there is [in planning documents]” and what “Council is going to approve.”¹⁸² Similarly, an opportunity to participate in an electrical vehicle charging station program was declined by city council, despite staff attempts to alert the council to state requirements regarding electric vehicles.¹⁸³

Local jurisdictions must also navigate between their planning priorities and those mandated by regional agencies. SB 375 requires each MPO in California to develop a Sustainable Communities Strategy (“SCS”) as part of its Regional Transportation Plan to reduce GHG emissions from cars and light trucks. The goal of SB 375 is to reduce GHG emissions by coordinating land use and transportation at the regional level, and currently, the Council of Governments for the eighteen metropolitan regions in California is actively implementing climate planning as required by SB 375. Local governments are required to align their land use and transportation policies with the SCS to contribute toward regional GHG reduction targets and ultimately to qualify for certain regional funding. Aligning local efforts with these regional plans can result in complications. For example, infrastructure upgrades and electrification—key components for meeting GHG reduction goals—require coordination with a Metropolitan Transportation Authority.¹⁸⁴ The combined need for coordination and lack of authority are equally frustrating for regional agencies, which are given climate mandates such as SB 375 but “advisory” rather than “implementation” authority to effectuate these laws.¹⁸⁵ For example one regional planner described creating plans with “no implementation tied to it, because we don’t have the authority” to mandate local action.¹⁸⁶

Finally, state laws and policies that require local action conflict with powers possessed by local governments. For example, SB 1000 requires cities and counties with disadvantaged communities to include an Environmental Justice Element in their General Plan or integrate environmental justice goals throughout. The Environmental Justice Element, among other requirements, obliges jurisdictions to reduce pollution exposure and improve air quality. However, local governments struggle to address environmental justice concerns due to lack of authority. For example, with regards to pesticide use, “We don’t have jurisdiction for the most part over pesticide application. It is managed here by the Agricultural Commissioner’s office, and they base their activities on a whole different host of state laws that the Department of Pesticide Regulation [administers].” This prevents local governments from enacting “additional or different noticing or pesticide application policies that are not consistent with state laws.”¹⁸⁷ Because environmental justice concerns, such as pollution exposure, water quality and access, air quality, and agricultural land equity, are widespread and under the authority of regional and state agencies, local governments struggle to meet their requirements under SB 1000 and other laws.

¹⁸⁰ Interviewee 21 on 10/16/2024, pg. 7.

¹⁸¹ Interviewee 26 on 10/23/2024, pg. 9.

¹⁸² Interviewee 35 on 11/7/2024, pg. 2.

¹⁸³ Interviewee 12 on 9/26/2024, pg. 10.

¹⁸⁴ Interviewee 25 on 10/22/2024, pg. 8.

¹⁸⁵ Interviewee 22 on 10/17/2024, pg. 10.

¹⁸⁶ Interviewee 41 on 11/13/2024, pg. 2.

¹⁸⁷ Interviewee 31 on 10/30/2024, pg. 8.

Coordination avoidance by local governments

Willingness to cooperate in novel policy programs is limited by a number of factors, including uncertainty, lack of clear objectives, opposing policy options, and “failure avoidance” to save time and resources and comport with existing behaviors and practices.¹⁸⁸ Governmental coordination in local climate action planning might (or might not) occur in at least several ways. First, coordination may occur between local governments and regional and state agencies. Second, intra-governmental coordination may occur among departments within a jurisdiction. Next, coordination may occur between and among local governments. And local governments may coordinate with their constituents, including community-based organizations. Each form of coordination is at times avoided by staff or local governments that seek to sidestep introducing or making difficult tradeoffs.

Regional bodies such as Metropolitan Planning Organizations (MPOs) and councils of governments (COGs) can provide local governments benefits such as (1) improved data sharing, (2) technology support, (3) policy alignment, and (4) expanded access to funding. MPOs are agencies created by federal law for metropolitan areas with populations greater than 50,000, to provide local elected officials input into planning for federal transportation funds.¹⁸⁹ MPOs offer a potential forum to address climate change while integrating climate actions with city and local planning.¹⁹⁰ COGs (or “regional councils”), are multi-service entities that serve as planning organizations and deliver a variety of federal, state, and local programs.¹⁹¹ Other regional collaboratives, such as the Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC), are voluntary networks of local governments, agencies, non-profit organizations, businesses, utilities, and academic institutions. These regional collaboratives may focus specifically on climate mitigation and adaptation for a certain region (as with the LARC), or they may cover a range of topics and challenges.¹⁹²

Laws such as SB 375 mandate regional coordination by requiring each MPO in California to develop a Sustainable Communities Strategy (“SCS”) as part of its Regional Transportation Plan to reduce GHG emissions from cars and light trucks. The goal is to reduce GHG emissions by coordinating land use and transportation at the regional level. COGs for the 18 metropolitan regions in California actively implement climate planning as required by SB 375. Local jurisdictions must align land use and transportation policies with their respective SCS to qualify for certain funding and to contribute toward regional GHG reduction targets. This creates incentives for coordination among cities within an MPO region.¹⁹³

Coordination at the regional level with Metropolitan Planning Organizations (MPOs), councils of governments (COGs), and other regional collaboratives could provide data and ensure technical assistance, funding, and other resources to local governments. One of the most expansive benefits of regional collaboration is access to consistent, high-quality data. For example, Southern California Association of Governments (“SCAG”) maintains a Regional Data Platform, an innovative system for collaborative data sharing and planning, meant to provide access to and streamline the exchange

¹⁸⁸ *Supra* n. 174.

¹⁸⁹ *What is a Regional Council, COG, or MPO?*, NAT’L ASS’N OF REGIONAL COUNCILS (2025), <https://narc.org/about/what-is-a-cog-or-mpo/>.

¹⁹⁰ Susan G. Mason & Michail Fragkias, *Metropolitan Planning Organizations and Climate Change Action*, 25 URBAN CLIMATE 37 (Sept. 2018), <https://doi.org/10.1016/j.uclim.2018.04.004>.

¹⁹¹ *See supra* n. 189.

¹⁹² *About LARC*, LOS ANGELES REGIONAL COLLABORATIVE (2025), <https://www.laregionalcollaborative.com/about>.

¹⁹³ *See* Mason et al., *Metropolitan Planning Organizations*, *supra* n. 190.

of data between jurisdictions and partners. Additionally, SCAG's local profiles and GHG inventory tools help cities generate technical reports. The San Diego Association of Governments ("SANDAG") provides open-access GIS datasets on land use, transportation, and demographic trends as well as crime data and socioeconomic datasets through the Open Data Portal on the SANDAG website. LARC's climate-specific data resources include a GHG inventory for Los Angeles County as well as meetings to encourage peer-to-peer knowledge transfers among planners and practitioners. Regional partners also offer technical assistance to cities with limited internal expertise or resources to fully develop their own climate goals. SCAG has a streamlined system to request technical assistance from their local information services team to help local governments access and utilize the data sharing available through SCAG.¹⁹⁴ SCAG also has "Toolbox Tuesday" which provides a range of planning knowledge and technical skills for local planners including training on various tools and resources on emerging planning topics such as equity, environmental justice, traffic safety, housing, transportation, sustainability, spatial analytics, programming language, and data literacy¹⁹⁵ as well as the Sustainable Communities Program which offers technical assistance and financial resources to help local communities implement regional planning policies and strategies.¹⁹⁶ SANDAG creates smaller working groups on topics such as Sustainable Communities that can be accessed and utilized for assistance in local climate planning.

Federal and state grants increasingly favor regional coordination. First, many state and federal funding programs give preference to applicants demonstrating regional coordination. For example, the California Strategic Growth Council's Climate Resilience Program prioritizes applicants demonstrating multi-jurisdictional planning. Metropolitan Planning Program, State Planning and Research Program, and federal grant programs provide additional funding for MPOs for transportation planning and research.¹⁹⁷ Second, regional collaboratives themselves can assist local jurisdictions through the operation of grant programs. SANDAG provides a variety of competitive grant programs to local jurisdictions, nonprofit organizations, community groups, and transportation partners. SANDAG has awarded grant funding to 585 grant projects across all grant programs. As of December 31, 2024, SANDAG has awarded \$188 million to jurisdictions, nonprofit organizations, local governmental agencies, federal agencies, and transit operators throughout San Diego County.¹⁹⁸ As described above, through coordination with SCAG, multiple Southern California jurisdictions received funding under the Sustainable Communities Program to support development of local planning and zoning decisions. SCAG is currently providing technical assistance to 57 local agencies and has funded 110 projects, totaling over \$21.6 million, since 2016.¹⁹⁹

Regional coordination is especially important for tackling cross-county issues that intersect with climate planning. This can include widespread policies such as (1) aligning GHG reduction goals, (2) managing transportation corridors that span multiple cities, (3) addressing environmental justice across communities with shared vulnerabilities, (4) pooling resources for climate resilience and emergency response, and (5) aligning EV infrastructure rollout, transportation planning, and land-

¹⁹⁴ *Regional Data Platform*, SOUTHERN CALIFORNIA ASS'N OF GOV'TS (2025), <https://scag.ca.gov/RDP>.

¹⁹⁵ *Local Resources*, SOUTHERN CALIFORNIA ASS'N OF GOV'TS (2025), <https://scag.ca.gov/our-work-local-resources>.

¹⁹⁶ *Sustainable Communities Program*, SOUTHERN CALIFORNIA ASS'N OF GOV'TS (2025), <https://scag.ca.gov/sustainable-communities-program>.

¹⁹⁷ *Program Guidance for Metropolitan Planning and State Planning and Research Program Grants*, U.S. DEP'T OF TRANSP., FEDERAL TRANSIT ADMIN., FTA C 8100.1D (Sep. 10, 2018), <https://www.transit.dot.gov/sites/fta.dot.gov/files/2023-01/program-guidance-metropolitan-planning-and-state-planning-and-research-c81001d.pdf>.

¹⁹⁸ *Grant Programs*, SOUTHERN CALIFORNIA ASS'N OF GOV'TS (2025), <https://www.sandag.org/funding/grant-programs>.

¹⁹⁹ See Sustainable Communities Program, *supra* n. 196.

use policy. Additionally, the coordination of policies can help cities and localities overcome collective action problems, which arise when individuals have a shared goal, but the lack of coordination inhibits a group from achieving the goal through collective effort due to individuals acting independently rather than coordinating.²⁰⁰

Attempts to strengthen regional climate efforts are already taking shape. For example, the San Joaquin Council of Governments formed a Regional Climate Collaborative “to fund climate mitigation and adaptation efforts in under-resourced communities.”²⁰¹ The Regional Climate Collaborative has embarked on several major projects, including creating adaptation databases, hosting educational workshops, and supporting equitable planning in their communities.²⁰² LARC’s LA Climate Action Framework is a multi-year and county wide climate action plan that includes jurisdiction specific efforts that smaller localities can look to and implement when creating their own Climate Action Plans or sustainability elements in General Plans to help them align with broader policy frameworks.²⁰³ On a smaller scale, the Western Riverside Council of Governments (“WRCOG”) provides member cities with a “Subregional CAP Template” that local jurisdictions can use to streamline the process of GHG reduction planning specifically.

Despite these innovations, a recent report found that “some [respondents] flagged that they have experienced challenges with regional-scale collaborations.”²⁰⁴ First, it creates complicated, political relationships that can lead to local governments feeling disadvantaged in local-regional agreements and avoiding coordination. Second, in smaller jurisdictions “whose demographic makeup varies from that of regional partners [...] priorities can become unaligned, resulting in the inequitable distribution of benefits.”²⁰⁵ Therefore, rural communities may avoid coordination for fear of both an “inequitable distribution of benefits” and a disagreement about how to select climate actions.²⁰⁶ Similarly, there are complications pertaining to the potential for altered tax-sharing agreements that would disproportionately harm smaller jurisdictions. For example, local jurisdictions can adopt local option sales taxes (LOST) to use increased tax revenue for development projects.²⁰⁷ While MPOs must meet GHG emissions reduction goals under SB 375, “LOSTs are not bound by requirements of SB 375, even though MPOs must still account for impacts of LOST spending.”²⁰⁸ Therefore, local jurisdictions who might need increased local taxes for projects and development might have to make tax-related concessions in regional agreements to assist in meeting SB 375’s regional targets.²⁰⁹

At the local level, certain jurisdictions have developed innovations to overcome the longstanding gap between comprehensive climate action and its demands for coordination. They have created

²⁰⁰ See Mason et al., Metropolitan Planning Organizations, *supra* n. 190.

²⁰¹ *San Joaquin Regional Climate Collaborative*, SAN JOAQUIN COUNCIL OF GOV^{TS} (2025), <https://www.sjcog.org/646/San-Joaquin-Regional-Climate-Collaborati>.

²⁰² *Id.*

²⁰³ *A Greater LA Climate Action Framework*, LOS ANGELES REGIONAL COLLABORATIVE (2025), <https://www.laregionalcollaborative.com/framework>.

²⁰⁴ Bedsworth et al., Getting to Implementation, *supra* n. 27, at 59.

²⁰⁵ *Id.* at 59.

²⁰⁶ *Id.*

²⁰⁷ Elisa Barbour & Noah Thoron, *County Sales Tax Measures for Transportation Can Affect Regional Plans for Sustainable Transportation*, UC DAVIS: NAT’L CENTER FOR SUSTAINABLE TRANSP. (2025), <http://dx.doi.org/10.7922/G21G0JM4> Retrieved from <https://escholarship.org/uc/item/2h40g923>.

²⁰⁸ *Id.*

²⁰⁹ Interviewee 11 on 9/26/2024, pg. 10.

“Green Teams,” designated a CAP Coordinator, or hired a Sustainability Manager. “Green Teams” involve creating an inter-departmental group across a local jurisdiction, assigning a person from each department responsibility for meeting CAP implementation goals and updating the team on progress. A CAP Coordinator involves appointing one person that oversees implementation of the CAP, collaborates with other government employees to coordinate actions, and tracks CAP progress. Similarly, a Sustainability Manager will manage CAP implementation but often has broader responsibilities over a jurisdiction’s other environmental and sustainability programs. For example, the City of San Diego has a dedicated Sustainability & Mobility team that oversees the implementation of their “Climate Action Implementation Plan,” along with work on their Mobility Master Plan, Zero Emissions Vehicles Programs, and climate equity efforts, among other programs.²¹⁰ This team conducted an Implementation Cost Analysis (ICA) report to account for known costs and staffing needs for the first 5 years of CAP implementation.²¹¹ Having a team or an individual coordinator dedicated to implementation helps effectively manage very technical tasks and clarify accountability issues by centralizing responsibility.²¹² One green team was described as setting expectations around climate and sustainability across a range of processes: “Our capital improvement program, the intake form for new projects, you have to explain how your project is consistent with our CAP. We have an internal CAP which is co-written by staff in every department, so there’s broad levels of ownership and buy in.”²¹³

A Green Team, CAP Coordinator, or Sustainability Manager can help ensure climate planning is integrated throughout local government. However, these positions require extra staff and technical expertise. In addition, certain capabilities for coordinated climate planning have degraded post-Covid. Prior to the pandemic, local coordination involved “a whole bunch of cities that were working collaboratively to have a voice to advance some of these [climate] recommendations” and to pressure state level actors to better assist local governments in meeting their goals and putting forth policies that aligned with their priorities.²¹⁴ Post-Covid, these local ties have weakened.²¹⁵ A crucial innovation in local climate planning would be to re-establish these local ties so that local governments can learn from each other, work with CBOs, and align their actions with local agencies. Additionally, a strong local network will increase each participating locality’s power to lobby for state-level assistance and policies.

Data generation, dissemination, and analysis during plan development are deficient

Lack of consistency and availability of data sources

Data are crucial for environmental justice and climate action planning, including to measure exposure, sensitivity, and adaptive capacity, and evaluate key areas such as infrastructure, natural

²¹⁰ CLIMATE ACTION IMPLEMENTATION PLAN, CITY OF SAN DIEGO (2023), https://www.sandiego.gov/sites/default/files/climate_action_implementation_plan_042723_final.pdf.

²¹¹ SUSTAINABILITY AND MOBILITY: CLIMATE ACTION PLAN, CITY OF SAN DIEGO (2022), <https://www.sandiego.gov/sustainability-mobility/climate-action/cap>.

²¹² *Climate Action Planning Guide*, C40 KNOWLEDGE HUB, https://www.c40knowledgehub.org/s/article/How-to-get-started-on-your-citys-climate-action-plan?language=en_US.

²¹³ Interviewee 39 on 11/12/2024.

²¹⁴ *Id.*

²¹⁵ *Id.*

resources, and public health.²¹⁶ Data related to GHG emissions is necessary to build a baseline emissions level, predict future emission scenarios, and establish a reduction goal.²¹⁷ AB 32, SB 32, SB 350, and AB 1279 set specific targets that must be achieved to reduce GHG emissions and increase renewable energy, all of which require detailed data and complex technical analysis.²¹⁸ SB 1000 requires the use of CalEnviroScreen to identify disadvantaged communities and evaluate jurisdiction-specific problems related to pollution exposure, food access, public facilities, and physical activity. However, the lack of accessible data has prevented policy setting and benchmarking.²¹⁹ For example, census tract data in CalEnviroScreen may not appropriately characterize some communities, such as rural communities, and cannot identify all environmental justice issues, such as proximity to public amenities or hazards.²²⁰ Similarly, using data limited to CalEnviroScreen is insufficient to address environmental justice.²²¹

One area highlighted as missing consistent data was public health:

One thing that comes up is the consistency of the data. That's the first thing I think of. I mentioned in particular with health, if there's a Kaiser in the area, then we have great visibility into all these health indicators for the region that's served by Kaiser. But if there's no Kaiser, then we don't have that data, and even Kaiser's methodology seems to change from area to area, so we don't necessarily have the same data points, for all regions. And then Kaiser aggregates for their whole service area. We don't necessarily have the granularity to see if the service area includes 4 or 5 cities, well, how do we know which is our city, the jurisdiction that we're working in. So, the consistency and the granularity of data is a challenge. Obviously, there's an incredible cost to collecting that data.²²²

Lack of consistent data limits their ability to identify public health impacts.²²³ Second, some local governments have access to private health data while others do not. Third, there is often a lack of granularity or specificity of data. Aggregate data can hide unique problems at the hyperlocal scale. Unfortunately, “there is no great secondary source for people’s health outcomes” at a “neighborhood scale.”²²⁴ Lack of localized data also discourages monitoring outcomes: “another big leap of faith is that any of these investments are actually improving anybody's health outcomes” at the local level.²²⁵ Without consistent, sufficiently granular data, accurate monitoring of climate actions and their attendant public health outcomes is difficult.

Inconsistent data sources also contribute to a lack of commensurability across planning measures. This was most evident when discussing GHG emission inventories that serve as baselines against which future emissions reductions are compared. For local actors, “getting data from any of the

²¹⁶ Cynthia R. Harris, *Best Practices in Local Climate Action Planning. Part I: An Introduction*, ENVTL. L. INST. (Jan. 10, 2022), <https://www.eli.org/vibrant-environment-blog/best-practices-local-climate-action-planning-part-i-introduction>.

²¹⁷ *Id.*

²¹⁸ *See* Appendix A.

²¹⁹ *Supra* n. 174.

²²⁰ *Best Practices for Implementing Senate Bill 1000 (SB 1000): The Planning for Healthy Communities Act*, CAL. DEP'T OF JUST. (2022), <https://oag.ca.gov/system/files/media/sb-1000-best-practices-en.pdf>.

²²¹ Michael E. Zuñiga & Michael Méndez, *The Emergence of Environmental Justice in General Plans: Lessons from California's Senate Bill 1000*, 60 URBAN AFFAIRS REV. 1123 (2024).

²²² Interviewee 3 on 9/6/2024, pg. 14.

²²³ *See* B.L. Cole et al., *Advancing Health Equity in Community-Based Climate Action: From Concept to Practice*, 113(2) AMER. J. OF PUBLIC HEALTH 185 (2023) (“Despite broad agreement that prioritizing health equity is critical to minimizing the health impacts of climate change, there is a lack of clarity about what advancing health equity means in practice.”).

²²⁴ Interviewee 14 on 10/1/2024, pg. 9.

²²⁵ Interviewee 14 on 10/1/2024, pg. 9.

utilities or anyone else” is vexing and would benefit from data or template inventories provided by the state.²²⁶ Respondents expressed the desire for uniform, state-generated inventories.²²⁷ It is difficult to assess state-level targets as local governments struggle to find accurate, consistent data, templates, or metrics to complete even their GHG emission inventories. This can lead to inchoate climate measures of type and intensity based on faulty, varying data.

Several innovations in this area were discussed. Respondents describe use of community-generated data, especially through the distribution of community air monitors, to improve data granularity.²²⁸ Others described novel datasets that are used to address climate issues such as extreme heat. For example, they discussed the use of syndromic surveillance to monitor how extreme heat events effect the public, which involves gathering “information from emergency-receiving hospitals within the county” when a patient is admitted with a heat-related illness. This information provides current data on how many people are suffering from illness and fatalities due to heat and at what temperatures these events occur.²²⁹ They described the importance of syndromic surveillance data as an example of providing near-real-time information regarding “what is happening right now in the community.”²³⁰

In the absence of consistent, widely available data, planners developed novel combinations of data to assess a range of environmental and climate-related issues. Such data innovations are unsustainable. They place undue strain on local governments to repeatedly search for and identify new solutions. And different data combinations lead to varying results, preventing comparison across departments and impeding coordinated action. This is complicated by the fact that concepts related to climate change and environmental justice, such as air quality and public health, call for cumulative impact analysis. Cumulative impact analysis involves evaluating the “interaction between many stressors on a community or neighborhood, and can even include past and current conditions,” compared to “traditional pollutant-by-pollutant environmental assessment.”²³¹ The Office of Environmental Health Hazard Assessment explains that “[c]umulative impact analysis involves analysis of multiple chemicals, multiple sources, public health and environmental effects, and characteristics of the population that influence health outcomes.”²³² Without available data sources to illustrate, assess, and monitor such variables, respondents discussed the use of imaginative datasets, such as syndromic surveillance and death certificate data, to monitor heat-related illnesses and deaths.²³³ One described getting “data requests for heat-related illness in different combinations of the same variables.”²³⁴ Another discussed building a climate action tool with “160 different data layers.”²³⁵ A third explained an agreement with residents regarding city- versus community-gathered

²²⁶ Interviewee 31 on 10/30/2024, pg. 16.

²²⁷ Interviewee 32 on 11/4/2024, pg. 12-13.

²²⁸ Interviewee 15 on 10/3/2024; *see also* Interviewee 24 on 10/21/2024; *see also* Interviewee 43 on 11/15/2024.

²²⁹ Interviewee 3 on 9/6/2024, pg. 1.

²³⁰ Interviewee 3 on 9/6/2024, pg. 2.

²³¹ Rachel Ramirez-Guest & Adam Reynolds, *States Lead in n Addressing Cumulative Impacts Through Community Engagement*, STATE ENERGY & ENVIRONMENTAL IMPACT CENTER (April 10, 2025), <https://stateimpactcenter.org/insights/states-lead-in-addressing-cumulative-impacts-through-community-engagement>.

²³² Linda S. Adams & Joan E. Denton et al., *Cumulative Impacts: Building a Scientific Foundation*, OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT (Dec. 2010), <https://oehha.ca.gov/sites/default/files/media/downloads/calenviroscreen/report/cireport123110.pdf>, at 3.

²³³ *See* Interviewee 43 on 11/15/2024; *see also* Interviewee 2 on 10/6/2024.

²³⁴ Interviewee 43 on 11/15/2024, pg. 2.

²³⁵ Interviewee 23 on 10/18/2024, pg. 11-12.

data: “To do local monitoring on their own, develop data that is more relevant to local conditions, because of the location of air quality monitoring stations in the area, and we were able to work out a compromise so that the city would use a combination of data sources.”²³⁶

Jurisdictions work with a mixture of private data, publicly available data at the state, regional, and local level, and community-generated data, each of which varies in availability and accuracy with respect to a given concern. This assortment of data can vary across jurisdictions and lead to inconsistencies that frustrate coordinated climate action. For example, one interviewee described available data as “amorphous,” “anecdotal,” and requiring “archival research” to obtain.²³⁷ Another explained that more consistent data would allow for comparison across jurisdictions: “Governments compare ourselves to each other. When you have people doing inventories and making comparisons to a different city, you have to be careful that they’re using the same baseline, or did they calculate it in a different way?”²³⁸ Local governments are not always able to obtain the appropriate combinations of data. For example, one respondent described having “very limited data just in terms of occupation in relation to illness and injury” and no data in response to questions from the public “on specific populations, like prevalence or occurrence of heat related injury among the homeless or children, and we can't speak to that at all.”²³⁹ As they are left to combine data sources that differ in availability and consistency, inter-jurisdictional comparison remains limited, as does target-setting and policymaking for crucial issues related to public health and other impacts.

Resource constraints for ground truthing data

Ground truthing in the context of environmental justice broadly means to compare and confirm quantified data via physically visiting a site, community engagement, and/or gathering localized, often community-generated, data. State agencies, at a summit on Best Practices for Community Engagement and Building Successful Projects, defined “ground truthing” as “the practice of confirming project or program details directly with stakeholders, to ensure feedback has been appropriately incorporated.”²⁴⁰ This practice is important to ensure projects and policies, guided by data, are accurate to the needs and environmental realities on the ground.²⁴¹ California agencies recommend using ground truthing as “a helpful tool and metric” during climate “project and program implementation, to confirm if transparency exists and if community-identified needs are being addressed as intended.”²⁴²

Due to the high cost of implementation,²⁴³ it is crucial to ensure that plans and projects are responsive to community needs. Though resource-intensive in its own right, ground truthing helps fill the gap between available data and community experience:

²³⁶ Interviewee 3 on 9/6/2024, pg. 9-10.

²³⁷ Interviewee 3 on 9/6/2024, pg. 14.

²³⁸ Interviewee 32 on 11/4/2024, pg. 13.

²³⁹ Interviewee 18 on 10/7/2024, pg. 4.

²⁴⁰ *Best Practices for Community Engagement and Building Successful Projects: A Summary from the 2018 Community Leadership Summit*, CALIFORNIA CLIMATE INVESTMENTS (Dec. 2018), <https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci-community-leadership-bestpractices.pdf>, at 14.

²⁴¹ James Sadd et al., *The Truth, the Whole Truth, and Nothing but the Ground-Truth*, USC EQUITY RESEARCH INSTITUTE (Dec. 2013), <https://dornsife.usc.edu/eri/publications/ground-truth/>.

²⁴² *Id.*

²⁴³ *Climate Action Plan Implementation Cost Analysis*, ENERGY POLICY INITIATIVES CENTER, <https://catcher.sandiego.edu/items/usdlaw/4-ICA.pdf>, at 14 (the price of CAP implementation averages roughly \$2.3 million).

Let's start to unpack all of the different things that build into those designations and link, for example, what are the measures in our Climate Action Plan that are really important for low-income residents? Or what are the measures that should be really important and prioritized in areas with really bad air quality? And trying to make that more direct tie to a very specific problem rather than the generalized census tract definition of disadvantaged or highest percentile on CalEnviroScreen [...] And we're leading these conversations, saying, this is initially what the data is telling us about your community. First, do you feel this is accurate for how your experience is here? And then, second, here are the things that we would, based on the data, say that you might want to see or could be beneficial to you. And then having that validation, meaning is this what you would want to see in your community and connecting it to, for example, it's really hot when you walk around in the summer. If we did street trees, or better infrastructure generally, is that what you're looking for? Or do you want us to do more with this? That's the gap right now, doing that data validation piece and connecting it to these real impacts rather than just this conglomerate definition of a community.²⁴⁴

This description reveals several crucial aspects of ground truthing. First, it demonstrates that ground truthing is important to identify and prioritize issues within a community.²⁴⁵ Second, it shows that current screening tools can obscure specific localities and their concerns in service of generalized or arbitrary spatial categories, such as census tracts. Communities are grouped into categories that do not match how they are organized and affected on the ground. Lastly, there is a gap between what the data reveal, when available, and real impacts within a community. For example, one respondent stated that there was “not a lot of ground truthing” relating to VMT, GHG reductions, and housing development.²⁴⁶ This can lead to “putting a lot of money into investment types, hoping that it moves the needle without really knowing whether it is.”²⁴⁷ Ground truthing, through community testimony and community-generated data is also a way to fill gaps in local data, rather than to confirm data that already exist.²⁴⁸ For many, “extremely localized data” constituted the data gap of greatest concern.²⁴⁹

Self-limiting nature of data portals and dashboards

Local governments do their best to overcome data availability and delivery limitations. Dashboards can track a jurisdiction’s progress toward their climate and environmental goals. They also affirm community participation and input by eliminating historical barriers to information about city policy as well as reliable environmental data.²⁵⁰ For example, a dashboard may provide data on adverse weather, environmental hazards, and community-reported problems.²⁵¹ In addition, data portals provide subject matter-specific data that can be used by planners and the public. For example, the San Diego Association of Governments (“SANDAG”) provides open-access GIS datasets on land use, transportation, and demographic trends as well as crime data and socioeconomic datasets through an Open Data Portal on its website.²⁵² Planners mentioned using several kinds of

²⁴⁴ Interviewee 41 on 11/13/2024, pg. 9-10.

²⁴⁵ Interviewee 37 on 11/11/2024, pg. 7.

²⁴⁶ Interviewee 14 on 10/1/2024, pg. 9.

²⁴⁷ *Id.*

²⁴⁸ Interviewee 38 on 11/11/2024, pg. 13.

²⁴⁹ Interviewee 23 on 10/18/2024, pg. 13.

²⁵⁰ *Supra* n. 176.

²⁵¹ See *Heat-Related Illness Dashboard*, RIVERSIDE UNIVERSITY HEALTH SYSTEM (Oct. 14, 2025),

<https://www.ruhealth.org/heat-related-illness-dashboard>; see also *SprayDays California*, CAL. DEP’T OF PESTICIDE REGULATION, <https://www.cdpr.ca.gov/2025/03/24/state-launches-spraydays-california-a-first-of-its-kind-notification-system-for-pesticide-applications/>; see also *Identifying Violations Affecting Neighborhoods (IVAN) Networks*, DEP’T TOXIC SUBSTANCES CONTROL, <https://dtsc.ca.gov/ivan-identifying-violations-affecting-neighborhoods/>.

²⁵² *Open Data Portal*, SAN DIEGO ASS’N OF GOV’TS (2025), <https://www.sandag.org/data-and-research/open-data-portal>.

dashboards and data portals in climate action planning. One discussed creating an online version of their General Plan that allows residents to view public-facing reports on the extent to which policies are implemented.²⁵³ Another described plans to create a dashboard that would have “real-time information and updates” along with a “portal where they can submit an online survey” and “provide their feedback.”²⁵⁴ Others outlined the use of heat-related illness and public health dashboards to provide information and alert community members of extreme heat events.²⁵⁵ While data portals and dashboards are valuable and can increase the ability to ground truth data, collect community-generated data, and tailor government actions to resident needs, they require substantial technical expertise to maintain. Dashboards and data portals require hiring someone trained to create the tools, or training existing staff, both of which take valuable staff time. One respondent discussed providing training and workshops around GIS, data platforms, and toolkits for local officials.²⁵⁶ However, under the best of circumstances, tools such as data portals and dashboards are self-limiting: they are “really expensive to develop and maintain, the more data you have.”²⁵⁷ They are quickly rendered outdated or obsolete, which reduces trust in local government.

Paucity of data to consider indoor/outdoor workplace hazards

Extreme heat and related impacts frequently arose as the most important concern among local governments.²⁵⁸ They characterized extreme heat as “the biggest existential threat to communities that we’re concerned about.”²⁵⁹ According to California’s Office of Environmental Health Hazard Assessment, heat is the leading cause of weather-related death in the United States.²⁶⁰ Extreme heat is of particular concern to indoor and outdoor workers, and “can occur during any season if the conditions are right, not only during heat waves.”²⁶¹ Our understanding of extreme heat and its effects on the human body remains in its early stages of development, with newer findings showing that temperature change can be more determinative of potential injury than absolute temperature.

Heat-related impacts include “exertional heat illness” from exertion and movement and “environmental heat illness” due to “ambient conditions, including heat and relative humidity.”²⁶² Outdoor industries that suffer disproportionate heat-related illness include agriculture, construction, landscaping, mail and package delivery, and oil and gas well operations.²⁶³ Indoor industries of note include bakeries, kitchens, and laundries, electrical utilities, fire service, iron and steel mills and

²⁵³ See Interviewee 31 on 10/30/2024.

²⁵⁴ Interviewee 39 on 11/12/2024, pg. 5.

²⁵⁵ Interviewee 43 on 11/15/2024, pg. 1.

²⁵⁶ Interviewee 23, on 10/18/2024, pg. 12.

²⁵⁷ *Id.* at 12-13.

²⁵⁸ See Interviewee 31 on 10/30/2024; see also Interviewee 11 on 9/26/2024; see also Interviewee 43 on 11/15/2024; see also Interviewee 39 on 11/12/2024; see also Interviewee 18 on 10/7/2024; see also Interviewee 28 on 10/28/2024; see also Interviewee 24 on 10/21/2024; see also Interviewee 30 on 10/29/2024; see also Interviewee 25 on 10/22/2024; see also Interviewee 14 on 10/1/2024; see also Interviewee 2 on 9/6/2024; see also Interviewee 16 on 10/3/2024; see also Interviewee 15 on 10/3/2024; see also Interviewee 23, on 10/18/2024; see also Interviewee 22 on 10/17/2024; see also Interviewee 21 on 10/16/2024.

²⁵⁹ Interviewee 14 on 10/1/2024, pg. 2.

²⁶⁰ *Extreme Heat*, OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT (July 1, 2024), <https://oehha.ca.gov/climate-change/epic-2022/changes-climate/extreme-heat>.

²⁶¹ *Overview: Working in Outdoor and Indoor Heat Environments*, OCCUPATIONAL SAFETY & HEALTH ADMIN., <https://www.osha.gov/heat-exposure>.

²⁶² *Id.*

²⁶³ *Id.*

foundries, manufacturing, and warehousing.²⁶⁴ California’s attempts to address extreme heat and occupational health are spotty at best. In 2005, the Division of Occupational Safety and Health (Cal/OSHA) enacted regulations to protect outdoor workers from heat.²⁶⁵ The rules apply to outdoor workplaces and include requirements for employers to provide drinking water and access to cool-down areas, encourage rest periods, and generate and implement high-heat and emergency response procedures, including through training and Heat Illness Prevention Plans.²⁶⁶ In 2016, SB 1167 directed Cal/OSHA to adopt heat-related illness standards for indoor workers.²⁶⁷ However, Cal/OSHA did not formally approve such regulations until recently. On June 20, 2024, the agency adopted a new rule regarding “Heat Illness Prevention in Indoor Places of Employment,”²⁶⁸ which “applies to most workplaces where the indoor temperature reaches 82°F” and “establishes required safety measures for indoor workplaces to prevent worker exposure to risk of heat illness.”²⁶⁹

Staff shortages, employer noncompliance, and lack of enforcement can render such rulemakings meaningless for workers.²⁷⁰ An audit of Cal-OSHA, released in July 2025, found “critical weaknesses in Cal/OSHA’s enforcement processes and staffing levels” and raised concerns about “the agency’s ability to protect California’s nearly 20 million workers effectively.”²⁷¹ One respondent argued, “It’s great that these protections are on the books, but when employers aren’t held accountable to actually implement them, it creates a tricky dynamic for workers to feel comfortable to speak up and file reports and press that the system protect them.”²⁷² Even with standards in place, enforcement agencies are understaffed, and workers are unable to advocate for their rights. For example, a report on state and federal workplace heat rules found that “[h]undreds of businesses repeatedly violated the California heat standard but avoided the higher fines typically associated with a ‘repeat violation.’”²⁷³ Cal/OSHA “routinely gave employers steep discounts on penalties for heat-related citations, sometimes down to \$0.”²⁷⁴ Respondents suggested funding aimed at outreach to workers to provide “know your rights information, resources about symptoms, resources about how to file complaints” in order to “shift the culture across work sites.”²⁷⁵ Other solutions include adequately training employees, increasing the number of inspectors, and raising the level of fines to encourage compliance.

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ Christopher E. Dawood & Erin A. Owen, *California Employers: Beware New Indoor Heat Illness Regulations Effective Immediately*, CAL. LABOR & EMPLOYMENT LAW BLOG (July 23, 2024), <https://www.callaborlaw.com/entry/california-employers-beware-new-indoor-heat-illness-regulations-effective-immediately>.

²⁶⁸ See *Cal/OSHA Heat Illness Prevention Guidance and Resources*, CAL. DEPT. OF IND. REL. (Aug. 2024), <https://www.dir.ca.gov/dosh/heatillnessinfo.html>.

²⁶⁹ *Id.*

²⁷⁰ Interviewee 18 on 10/7/2024, pg. 6.

²⁷¹ Karen F. Tynan & Robert C. Rodriguez, *California State Auditor Reports ‘Critical Weaknesses in Cal/OSHA’s Processes*, OGLETREE DEAKINS (July 21, 2025), <https://ogletree.com/insights-resources/blog-posts/california-state-auditor-reports-critical-weaknesses-in-cal-oshas-processes/>.

²⁷² *Id.*

²⁷³ Juanita Constible, *California Lessons for Federal & State Workplace Heat Rules*, NAT. RES. DEFENSE COUNCIL (Sep. 14, 2022), <https://www.nrdc.org/bio/juanita-constible/california-lessons-federal-state-workplace-heat-rules>.

²⁷⁴ *Id.*

²⁷⁵ *Id.*

While “California has one of the oldest and most robust occupational heat standards in the county,” there is no federal standard to protect workers from heat-related illnesses.²⁷⁶ A patchwork of California regulations applies to different workers residing in the state, despite their being exposed to the same extreme heat risk. And scientific research behind heat-related illness proceeds at a rapid pace, potentially rendering existing rules obsolete. Extreme, rapid changes in temperature can cause heat illness at as low as 70 degrees Fahrenheit.²⁷⁷ This is important, because certain heat regulations only apply once temperatures reach a certain high, such as the 82 degrees Fahrenheit threshold for indoor workers. Understanding that heat-illness can occur at lower temperatures could alter how employers are regulated and workers are protected from heat-related illness.²⁷⁸ Better understanding heat risk is crucial to crafting effective policies to protect both indoor and outdoor workers.

Inadequate leveraging of schools to promote data generation and dissemination

Partnering with local schools was cited as encouraging young local leaders, improving engagement, and increasing linguistic accessibility within the community. These efforts include involving schools in a local government’s CAP, teaching and training students about sustainability and climate action, and assisting schools in developing their own CAPs to contribute to local GHG emissions reduction. Organizations such as Climate Action Pathways for Schools “work with school districts across California to ensure that student leaders are empowered to enact projects that reduce their school’s GHG emissions while building local climate resilience.”²⁷⁹ Jurisdictions such as San Mateo County highlight School Climate Action Initiatives as a way to decrease GHG emissions while also “fostering a culture of sustainability and stewardship among students and staff.”²⁸⁰ One respondent noted that they “partnered with the local high school’s environmental club” to facilitate discussions during the outreach process.²⁸¹ Another claimed that creating a partnership with their high school allowed them to reach linguistically isolated communities:

We had an interactive online survey. And [REDACTED] has a dozen different languages spoken, so it would be cost prohibitive to translate everything into 10 or 12 different languages, but what we did was to work with high school students who are bicultural, bilingual, and we introduced them to the survey, and then we got them to help their friends and neighbors and relatives in the neighborhood who are linguistically isolated, and walk them through the survey to get their opinions. And each of these 10 or 20 students did 10 or 15 interviews with friends and family members. So, we got this incredible wealth of input from linguistically isolated communities that we wouldn't have heard from otherwise.²⁸²

Schools and their students can serve as an important resource for not only providing expertise and language access to certain segments of the community, but also for achieving widespread climate engagement that would otherwise be unaffordable.²⁸³ This is especially important, as local

²⁷⁶ *Id.*

²⁷⁷ Interviewee 2 on 9/6/2024, pg. 3.

²⁷⁸ *Id.*

²⁷⁹ *Become a School Partner*, CLIMATE ACTION PATHWAYS FOR SCHOOLS (2025), <https://www.climateactionpathways.org>.

²⁸⁰ *School Climate Action Initiatives*, SAN MATEO COUNTY (May 2025), https://sustainablesanmateo.org/wp-content/uploads/2025/05/School-Climate-Action-Initiatives-_202505.pdf.

²⁸¹ Interviewee 2 on 9/6/2024, pg. 3.

²⁸² Interviewee 3 on 9/6/2024, pg. 5.

²⁸³ Interviewee 17 on 10/4/2024, pg. 12.

governments struggle to find and maintain staff and provide access for linguistically isolated residents.²⁸⁴

Post-Approval CAP Implementation Challenges

Sequencing challenges and “internal CAPs”

Absent state mandates, it is incumbent on local governments to establish ambitious goals within their relevant climate action planning documents in order to create lasting change.²⁸⁵ However, articulating goals is of limited effectiveness without accompanying implementation strategies that are extensive and practicable.²⁸⁶ In some jurisdictions, climate action planning suffers because authorities neglect implementation planning.

Effective implementation roadmaps can help jurisdictions put policy into action, adopt a cohesive strategic approach, assign responsibility, encourage accountability, monitor progress, and eventually assess outcomes.²⁸⁷ These implementation roadmaps are sometimes referred to as “internal CAPs,” because they are used within a local government to track climate action planning efforts. Additionally, having a team dedicated to implementation can help manage very technical tasks and clarify accountability issues by centralizing responsibility.²⁸⁸ This is vital not only to effective climate action but also as a matter of equity, as the consequences of unaddressed gaps in implementation will be felt disproportionately by disadvantaged communities.

You've got your CAP adopted. What do you do the day after, if you haven't been doing it already? It's budget setting, commitment to create staff like interdepartmental committees, where coming away from this, the first thing is, everyone knows their assignment. What does public works have to do? What does the planning department have to do? Who's the convener, and how regularly are we going to meet and hold ourselves accountable? Having that interdepartmental commitment, when that gets done, CAPs get implemented.²⁸⁹

Interviewees described using “green teams” that “convene staff from across departments,” as well as an internal CAP that is “co-written by staff in every department.”²⁹⁰ Including staff from across departments is crucial to implementation. One respondent noted that they co-wrote their internal CAP to ensure “broad levels of ownership and buy in.”²⁹¹ Another described the process of “lay[ing] out the roles and responsibilities of the individual members” in order “to keep someone consistently engaged from those departments as a coordinator of those activities.”²⁹² They explained that creating these internal structures is important for the maintenance and momentum of the planning document. Others emphasized the intersection of implementation plans and known timelines: “We

²⁸⁴ Interviewee 11 on 9/26/2024, pg. 4.

²⁸⁵ Cynthia R. Harris, *Best Practices in Local Climate Action Planning. Part I: An Introduction*, ENV'T L. INST. (Jan. 10, 2022), <https://www.eli.org/vibrant-environment-blog/best-practices-local-climate-action-planning-part-i-introduction>.

²⁸⁶ *Learn About Climate Action Plans*, DAVID SUZUKI FOUNDATION, <https://davidsuzuki.org/what-you-can-do/learn-about-climate-action-plans/>.

²⁸⁷ *Id.*

²⁸⁸ Climate Action Planning Guide, *supra* n. 212.

²⁸⁹ Interviewee 13 on 9/30/2024, pg. 11.

²⁹⁰ Interviewee 39 on 11/12/2024, pg. 9.

²⁹¹ *Id.*

²⁹² Interviewee 44 on 11/20/2024, pg. 8.

have an implementation plan. Here are the first five years. Here's what we think we should be doing, and we go back to our board and commission every six months or every year.”²⁹³

Although internal CAPs have potential benefits, they can be problematic. Perhaps the greatest concern is the potential lack of meaningful public involvement in any “internal” plan. As a result, which measures get prioritized can become especially dependent on “internal” factors such as staff or city councilmember preferences.²⁹⁴ Additionally, implementation plans are another expensive document that requires extra funding, additional staff time, and capacity to create and update, especially if best practices counsel for meaningful public access and input. However, jurisdictions may be able to rely on a grant from the state to draft their CAP implementation plan.²⁹⁵

Prioritizing action, deprioritizing monitoring

Scholars and practitioners alike place growing emphasis on evidence-based policymaking, including policy direction and effectiveness determined through monitoring and evaluation.²⁹⁶ Respondents acknowledge the importance of monitoring, or quantitative and qualitative measures of progress, to gauge how well climate actions work and whether adjustments are necessary. Yet planners assigned measurement to a “second priority” status. With regards to the importance of monitoring, one respondent explained how it is necessary to “have some accountability to the plan” so that they “can say [...] did we even do this?”²⁹⁷ Another described how the use of monitoring and tracking, including community feedback, creates a complex, circular process of implementation.

So now, how are we going to track and update these 100-plus, almost 200 items. What we need to figure out, because we all know behind the scenes what we're doing and what's happening. But then we have to stop and inform everyone of what's happening. So, we need to figure out how we're going to make this work. It feels like we're always moving. Let's pause it, update everything. And then it's more feedback like, okay, let's keep working. It's like a circle.²⁹⁸

But constant updates and informing the public require additional staff time, technical expertise, and funding. Overburdened jurisdictions therefore focus the bulk of their efforts on simply implementing programs and actions that are deemed crucial to meeting their climate goals. Such jurisdictions are unable to ensure their actions have intended benefits, inform communities, or adjust programs where needed. The decision to monitor involves several trade-offs:

Our discipline loves to talk about inventories and [Key Performance Indicators, or] KPIs. And then we argue endlessly about the right way to do it, and what data we should use, worse, that utilities give us wrong data. The models are coarse and weird. I come down on the side of all models are wrong, but some models are useful, and inventories and progress trackers can tell us the general direction that we're headed in the general scale, but not much more. So, for us, we want to know directional and scale impacts, instead of spending 120 hours of staff time getting to the next decimal level. We would rather just be doing work. And so, there are trade-offs there, like we're not totally certain everything's working how we think it is, but we're pretty sure things are going in the right direction. And it's particularly true

²⁹³ Interviewee 45 11/25/2024, pg. 6.

²⁹⁴ Interviewee 36 on 11/7/2024, pg. 7.

²⁹⁵ Interviewee 8 on 9/24/2024, pg. 1.

²⁹⁶ Cohen et al., *A Review of U.S. City Climate Action Plans*, *supra* n. 33.

²⁹⁷ Interviewee 16 on 10/3/2024, pg. 7.

²⁹⁸ Interviewee 31 on 10/30/2024, pg. 9.

for municipal operations, and we have access to our own bills and our own data. We see that the work we're doing is working.²⁹⁹

The decision to monitor leads to additional decisions over what kind of data to use and modeling approaches, compounded by the fact that some models are not very specific or accurate. Staff often prefer to spend time simply implementing measures: “the kind of documenting, the metrics [...] that becomes secondary” for cities that “don’t have the capacity.”³⁰⁰ “We’re flying by the seat of our pants, just making changes here that are real and opportunistic, and really kind of having the infrastructure to then figure out how to measure and, secondly, do the measuring, becomes kind of a second priority.” Bringing “the heart and soul of the General Plan to fruition” took precedence; “when we go back in terms of exact impacts, impacts on VMTs and our carbon footprint, we haven’t been able to translate it to that level.”³⁰¹ They underscored the decisions that local governments are forced to make with regards to implementation: use available capacity to get actions in place that will benefit their communities, or take away a sizable portion of limited resources to carefully measure effects.

Costs of full plan implementation far exceed available funding

CAP implementation is costly, and few state requirements are accompanied by funding to meet existing mandates. Total CAP implementation costs average around \$2.3 million, while jurisdictions such as the County of San Diego have estimated implementation costs as high as \$236 million over the first six years. Furthermore, unexpected costs arise under certain climate measures, especially adaptation-focused actions that require systems change. California does not “ever consider the total cost of implementation.”³⁰² When “you’re changing systems [...] there’s unintended consequences,” including environmental costs and maintenance for climate actions such as solar installation.³⁰³ New infrastructure development is another cost of implementing climate actions such as vehicle electrification. For example, electric vehicles can cost anywhere from \$30,000 to \$352,000, depending on the model and type of vehicle (i.e., cars, buses).³⁰⁴ However, implementation costs can also include installation fees for charging stations that cost between \$5,500 and \$40,000, maintenance of vehicles and charging stations, and potential electrical conduit upgrades, which cost anywhere from \$12,000 to \$15,000.³⁰⁵ These costs become untenable for underfunded jurisdictions.

Respondents often described supplementary and unanticipated costs of implementation. For example, funding for vegetative barriers to mitigate extreme heat and pollution exposure, when available, typically lasts for a few months.³⁰⁶ Long-term responsibilities create additional work for public works departments that may already lack the resources to maintain them. For example, a tree planting cost-benefit analysis found that total implementation includes costs of initial planting, pruning, irrigation, pest and disease treatments, tree and stump removal, infrastructure repair due to

²⁹⁹ Interviewee 39 on 11/12/2024, pg. 3-4.

³⁰⁰ Interviewee 8 on 9/24/2024, pg. 3-4.

³⁰¹ *Id.*

³⁰² Interviewee 8 on 9/24/2024, pg. 8-9.

³⁰³ *Id.*

³⁰⁴ *Supra* n. 146.

³⁰⁵ *Supra* n. 147.

³⁰⁶ Interviewee 18 on 10/7/2024, pg. 7.

damage caused by tree root systems, liability costs, administrative operating costs, and cleanup.³⁰⁷ EPA estimated that these costs total \$65 per tree per year in cities such as Berkeley, California.³⁰⁸ Continued maintenance costs that are not reflected in initial funding to implement climate actions can lead jurisdictions to forego long-term financial benefits. For example, EPA found that, “on a per-tree basis, cities accrued benefits ranging from about \$1.50–\$3.00 for every dollar invested.”³⁰⁹

The high anticipated cost of implementation can also reduce the likelihood of plan enactment. “Funding is quite sporadic” and local governments often wait for regular, dedicated funding for climate action.³¹⁰ For some, cost renders implementation infeasible, especially with regards to new technology adoption.³¹¹ One respondent noted that their jurisdiction is “already operating on thin margins,” such that supplementary and unanticipated costs could bankrupt them.³¹² Another argued that large-scale climate actions, such as those involving transportation options, can cost “billions and billions of dollars,” demand “a lot of attention,” and draw “a lot of politics” around their enactment.³¹³ Additionally, projects with high implementation costs at times force jurisdictions to consider trade-offs between regional efforts and local climate actions and benefits.

Implementation severely limited by insufficient workforce development

Another challenge to implementation is the lack of trained professionals to plan for and work on climate programs. This includes a shortage of planners qualified to create Climate Action Plans and Environmental Justice Elements, especially in smaller, disadvantaged jurisdictions, as well as a lack of professionals to work on advanced climate technology adoption such as EVs. As of 2024, the US Census estimated California had a population of approximately 39,431,263.³¹⁴ Meanwhile, the US Bureau of Labor Statistics estimated that California had 7,330 urban and regional planners in 2023 and the American Planning Association of California states that they have over 5,000 members.³¹⁵ Thus, California has approximately one planner for every 5,379 people. It is unclear how many planners are certified by the American Institute of Certified Planners (AICP), an accreditation that “assures clients, colleagues, and communities that your employees have the necessary expertise, knowledge, and commitment to ethics.”³¹⁶ Certain AICP certification also involves testing for knowledge of environmental issues, as well as climate change mitigation and adaptation, meaning non-certified planners may miss essential training on these subjects.³¹⁷

³⁰⁷ Antoine Kunsch & Ryan Parks, *Tree Planting Cost-Benefit Analysis: A Case Study for Urban Forest Equity in Los Angeles*, TREE PEOPLE (2021), <https://www.treepeople.org/wp-content/uploads/2021/07/tree-planting-cost-benefit-analysis-a-case-study-for-urban-forest-equity-in-los-angeles.pdf>, at 12.

³⁰⁸ *Using Trees and Vegetation to Reduce Heat Islands*, U.S. ENVTL. PROT. AGENCY (2017), [https://19january2017snapshot.epa.gov/heat-islands/using-trees-and-vegetation-reduce-heat-islands_.html#:~:text=The%20primary%20costs%20associated%20with,%20in%20these%20cities.&text=Althou gh%20the%20benefits%20of%20urban,approximately%20\\$30%E2%80%93\\$90%20per%20tree.](https://19january2017snapshot.epa.gov/heat-islands/using-trees-and-vegetation-reduce-heat-islands_.html#:~:text=The%20primary%20costs%20associated%20with,%20in%20these%20cities.&text=Althou gh%20the%20benefits%20of%20urban,approximately%20$30%E2%80%93$90%20per%20tree.)

³⁰⁹ *Id.*

³¹⁰ Interviewee 18 on 10/7/2024, pg. 6.

³¹¹ *See* Interviewee 31 on 10/30/2024, pg. 12.

³¹² *Id.*

³¹³ Interviewee 45 on 11/25/2024, pg. 5.

³¹⁴ *US Census*, US CENSUS BUREAU, <https://www.census.gov/quickfacts/fact/table/CA/PST045224>.

³¹⁵ *California Chapter*, AMER. PLAN. ASS'N CALIF., <https://www.apacalifornia.org/about-us/california-chapter/>.

³¹⁶ *Value of AICP Employees*, AMER. PLAN. ASS'N, <https://www.planning.org/aicp/value/>.

³¹⁷ *Information for the AICP Advanced Specialty Certification Examinations*, APA & AICP, https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/asc/pdf/ascbulletin.pdf.

One interviewee discussed the difficulty of training and retaining planners; they often expend their own time and resources to teach new planners, but then “some other agency comes and steals them.”³¹⁸ Well-qualified and trained planners will often seek higher paying jobs, leaving jurisdictions that cannot afford to pay increased salaries. Without these planners that the jurisdiction has taken time to train, disadvantaged jurisdictions can fall behind on implementation.³¹⁹

The state can come up with any plan, any requirement they want, and now, how it's done is we hire a consultant. They prepare something. We work on the General Plan; it sits on a shelf. And I know that's not a good way of looking at it, especially as a city manager. But I'm telling you, that's just how it happens. And then you get caught up because you have such little staff here in the [Central Valley], like the number of planners per 1,000, it's very low. And not only the number, but you also have to look at what the education attainment levels are, right? There's very few AICP planners. When I was at the City of [REDACTED], I was the first one to get it in like two decades.³²⁰

Lack of appropriately trained staff contribute to plans that only “sit on the shelf,” along with lack of funding, absence of implementation plans, and limited political will. Climate action targets and goals will not be met if jurisdictions do not have the requisite suite of professionals to create and enact the relevant planning documents. Relatedly, trained professionals are needed to adopt and operate newer climate technologies and programs. For example, one respondent discussed a “workforce development program” that involved job training for “electric vehicle charging station maintenance and installation,” “solar energy,” and “electrification.”³²¹

Interlocal and regional coordination severely limited by power dynamics and competition

As discussed above, while interlocal coordination is encouraged as a helpful tool for CAP development, regional dynamics impede implementation and create further conflicts. Conflicts can arise between local jurisdiction priorities for local sales taxes and regional requirements under SB 375. Similarly, under the Regional Housing Needs Assessment (RHNA), HCD determines the regional housing need for each Council of Governments to “account for both the existing and projected housing need in each region”³²² and allocate the housing need among jurisdictions in the region.³²³ At times, local government priorities conflict with the results of the RHNA. Some local jurisdictions feel that the RHNA process “strips local jurisdictions [...] of control over zoning and development in our city.”³²⁴ Where local governments perceive regional interests as ignoring local priorities and considerations, coordination is hindered. For example, one interviewee described feeling like the “little brother” in regional collaborations that see their jurisdiction bear the consequences of climate actions: “we’re dealing with all the impacts of these [more intensive land] uses, even though they are contributing to a regional cleaning of the air.”³²⁵ Smaller jurisdictions that were negatively impacted by regional agreements describe avoiding future regional collaboration.

³¹⁸ Interviewee 11 on 9/26/2024, pg. 4.

³¹⁹ *Id.*

³²⁰ *Id.* at 12.

³²¹ Interviewee 21 on 10/16/2024, pg. 13.

³²² *Regional Housing Needs Allocation (RHNA)*, CAL. DEP'T OF HOUSING & CMTY, <https://www.hcd.ca.gov/planning-and-community-development/regional-housing-needs-allocation>.

³²³ *Id.*

³²⁴ *Los Altos Residents*, LOS ALTOS RESIDENTS, <https://www.losaltosresidents.org/rhna-sb9-sb10>.

³²⁵ Interviewee 8 on 9/24/2024, pg. 8.

Smaller jurisdictions may also avoid collaboration due to impacts to their tax sharing agreements, which are how “cities survive.”³²⁶ Currently, California has a fragmented sales tax approach that “allows corporations to pit municipalities against each other in a bidding war where the prize is siphoned tax revenue, not growth.”³²⁷ This dynamic occurs, because local jurisdictions can negotiate with large retailers; in exchange for building stores and offices in their community, local jurisdictions can “agree to give them back a portion of the local sales tax revenue they generate.”³²⁸ Smaller, economically disadvantaged communities may promise higher portions of local tax revenue to corporations in order to increase much-needed development, diverting revenue that “could otherwise be used for schools, infrastructure, public safety, and other vital services.”³²⁹ One interviewee suggested changing the tax increments to improve climate action outcomes.³³⁰

Furthermore, regional frameworks applicable to housing and development can limit implementation by providing a long-term, regional outlook that is not easily translated to local conditions. For example, one interviewee noted that regional transportation plans can make use of a “25-year outlook.”³³¹ Another discussed the difficulty of fitting regional plans into their own planning strategies. Yet another expressed how this dynamic makes implementation difficult from a regional perspective.

And there's a big call for reconsidering how we're looking at land use and what our land uses are, you know. [REDACTED] had their regional transportation plan. They called out mobility hubs and really kind of did that first prod of saying that we need to really rethink where we're building homes, where we're zoning for different businesses, how we're interacting with our development community that came under a lot of fire in the region. But that's still a part of, kind of even within the regional decarbonization framework, saying at the end of it, Climate Action Plans and policies that the cities can do can only do so much without really rethinking our land use strategies.³³²

There is a regional collaboration gap where there is no one even looking at an accounting level. There's no one agency that can actually, that has enough authority to really implement an aggressive vision for climate action. And so, we're left in a situation where we have to hope that we can convene enough of us together to kind of piecemeal away together. There are no real teeth to any of it outside of what we do individually within our own jurisdictions.³³³

Local and regional actors struggle to implement climate actions as coordination is strained or avoided altogether.

Funding scarcity, burdensome requirements, and timelines

Funding was among the most common barriers to CAP implementation discussed in interviews. This is concerning, as a 2023 report found that “responding jurisdictions were most likely to identify staff capacity and funding as resource needs for moving actions from the planning stage to the

³²⁶ Interviewee 11 on 9/26/2024, pg. 10, 12.

³²⁷ Andrew Leahey, *Transparency Alone Won't Fix California's Corporate Tax Drain*, BLOOMBERG LAW (March 25, 2025), <https://news.bloomberglaw.com/tax-insights-and-commentary/transparency-alone-wont-fix-californias-corporate-tax-drain>.

³²⁸ *Id.*

³²⁹ *Id.*

³³⁰ Interviewee 23 on 10/18/2024, pg. 7.

³³¹ Interviewee 22 on 10/17/2024, pg. 16.

³³² Interviewee 41 on 11/13/2024, pg. 7.

³³³ Interviewee 23 on 10/18/2024, pg. 15.

implementation stage.”³³⁴ Competitiveness among jurisdictions for scarce opportunities, burdensome requirements to acquire, maintain, and report on funded efforts, and tight timelines for creating and implementing plans and projects featured prominently.

Funding opportunities at the regional, state, and federal level present jurisdictions with opportunities to engage in climate action planning. At the federal level, the Inflation Reduction Act (IRA) of 2022 and the Infrastructure Investment and Jobs Act (IIJA) of 2021 are principal federal funding opportunities for climate investment that could apply to many local governments. Both prioritize funding for projects that advance environmental justice and equity. Specifically, the “Environmental and Climate Justice” program established through the Inflation Reduction Act by EPA during the Biden Administration allocates funds for grants to support community projects addressing environmental justice concerns, which require the consideration of disproportionately affected communities.³³⁵ Until recently, the EPA website provided a comprehensive list of environmental justice grant programs which can, in part, be utilized for the preparation of General Plans and CAPs considering climate equity, as well as other opportunities for jurisdictions to receive technical assistance in the environmental justice space.³³⁶ The current administration has already dismantled substantial federal funding for climate and environmental justice efforts.

Regional organizations such as MPOs also offer funding opportunities for climate action. For example, SANDAG provides a variety of competitive grant programs to local jurisdictions, nonprofit organizations, community groups, and transportation partners. SANDAG has awarded grant funding to 585 grant projects across all grant programs. As of the end of 2024, SANDAG awarded \$188 million to jurisdictions, nonprofit organizations, local governmental agencies, federal agencies, and transit operators throughout San Diego County.³³⁷ Through coordination with SCAG, multiple Southern California jurisdictions received funding under the Sustainable Communities Program to support development of local planning and zoning decisions. SCAG is providing technical assistance to 57 local agencies and has funded 110 projects, totaling over \$21.6 million, since 2016.³³⁸ At the state level, programs such as California Climate Investments apply proceeds from the Greenhouse Gas Reduction Fund to support projects that reduce GHG emissions and improve public health and the environment.³³⁹ Specific programs like the Integrated Climate Adaptation and Resiliency Program (ICARP) support climate action planning throughout the state.³⁴⁰

Despite these opportunities, respondents identified three main problems with funding: 1) levels of funding available, 2) difficulty obtaining available funding, and 3) difficulty maintaining funding once acquired. Funding availability is complicated by the competitiveness of grants. Jurisdictions often are pitted against each other for limited opportunities. For example, one respondent noted that less resourced, smaller communities often lost grant opportunities to larger, wealthier jurisdictions,

³³⁴ Bedsworth et al., *Getting to Implementation*, *supra* n. 27, at 5.

³³⁵ *Environmental Justice Grants, Funding, and Technical Assistance*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/environmentaljustice/environmental-justice-grants-funding-and-technical-assistance>.

³³⁶ *Id.*

³³⁷ Program Guidance for Metropolitan Planning and State Planning and Research Program Grants, *supra* n. 197.

³³⁸ Sustainable Communities Program, *supra* n. 196.

³³⁹ *Latest Updates*, CALIFORNIA CLIMATE INVESTMENTS, <https://www.caclimateinvestments.ca.gov/>.

³⁴⁰ *Integrated Climate Adaptation and Resiliency Program (ICARP)*, CA GOVERNOR’S OFFICE OF LAND USE AND CLIMATE INNOVATION, <https://lci.ca.gov/climate/icarp/#about-icarp>.

despite having proportionately more disadvantaged communities.³⁴¹ Multiple respondents described funding access as “competitive.”³⁴² This leads to an imbalance in the distribution of funds for climate action: “there is not a fair return to certain parts of the state based on population and their need.” “Southern California has about half the state’s population and then we also have 70% of what the state defines as disadvantaged communities within our region. But the amount of the money that is flowing down to our region in terms of climate action, it’s less than that. We typically get less than half of it.”³⁴³ This situation is further exacerbated by shrinking federal assistance for climate change and environmental justice efforts under the current administration.³⁴⁴

Local governments also struggle with difficulties obtaining and maintaining funding. The process of finding, applying for, and sustaining funding and grants was described as follows: “And it’s just so overwhelming. It’s daunting for communities, for rural communities. They need a full-time person to be able to maintain this [funding] process, not only to write the grant, but to maintain.”³⁴⁵ Jurisdictions already struggling to create planning documents and implement climate action efforts often do not have the capacity or expertise to apply for and maintain funding opportunities, or to hire a grant writer. The structure of funding sources also frustrates maintenance—specifically, the timelines within which jurisdictions are required to meet certain goals and provide reporting updates. Some are intimidated by federal funding because “it gets complicated very quickly” or “[i]t’s just something [for which] I don’t have the bandwidth.”³⁴⁶ Complications arise from “[r]eporting requirements after the fact,” involving “a lot of technical data.”³⁴⁷ Upon accepting a federal grant, they might be presented with a “tight timeline” to complete a CAP document.³⁴⁸ Grant maintenance involves documenting everything, meetings with team members, strict timelines, and additional management responsibilities. Jurisdictions that are already under-funded and under-resourced may struggle to keep up with complicated grant requirements, thereby discouraging applications for funding from the communities that need it most. Streamlined, widely accessible grant programs for land use and climate planning were frequently highlighted as one of the most impactful potential fixes.³⁴⁹ At the same time, certain programs were highlighted for their innovative funding structure, including the Buildings Upgrade Prize. This federally funded prize supports building resiliency and efficiency upgrades.³⁵⁰ The prize was lauded for its flexible structure, low-maintenance reporting

³⁴¹ See Interviewee 31 on 10/30/2024.

³⁴² Interviewee 40 on 11/13/2024, pg. 12; see also Interviewee 36 on 11/7/2024, pg. 10; see also Interviewee 23 on 10/18/2024, pg. 5-6; see also Interviewee 32 on 11/4/2024, pg. 4; see also Interviewee 21 on 10/16/2024, pg. 6.

³⁴³ Interviewee 23 on 10/18/2024, pg. 5-6.

³⁴⁴ Marianne Lavelle & Peter Aldhous, *EPA Funding Cuts Target Disadvantaged Communities, Analysis Shows*, INSIDE CLIMATE NEWS (May 1, 2025), <https://insideclimatenews.org/news/01052025/trump-epa-funding-cuts-target-disadvantaged-communities/>.

³⁴⁵ Interviewee 28 on 10/28/2024.

³⁴⁶ Interviewee 35 on 11/7/2024, pg. 11.

³⁴⁷ *Id.*

³⁴⁸ Interviewee 22 on 10/17/2024, pg. 3-4; Interviewee 19 on 10/8/2024, pg. 9.

³⁴⁹ See Interviewee 13 on 9/30/2024; see also Interviewee 31 on 10/30/2024; see also Interviewee 37 on 11/11/2024; see also Interviewee 18 on 10/7/2024; see also Interviewee 28 on 10/28/2024; see also Interviewee 30 on 10/29/2024; see also Interviewee 17 on 10/4/2024; see also Interviewee 36 on 11/7/2024; see also Interviewee 25 on 10/22/2024; see also Interviewee 14 on 10/1/2024; see also Interviewee 35 on 11/7/2024; see also Interviewee 38 on 11/11/2024; see also Interviewee 40 on 11/13/2024; see also Interviewee 16 on 10/3/2024; see also Interviewee 45 on 11/25/2024; see also Interviewee 32 on 11/4/2024; see also Interviewee 23 on 10/18/2024; see also Interviewee 21 on 10/16/2024; see also Interviewee 12 on 9/26/2024.

³⁵⁰ *Buildings Upgrade Prize*, U.S. DEP’T OF ENERGY, <https://www.energy.gov/eere/buildings/buildings-upgrade-prize-buildings>.

scheme, and upfront funds.³⁵¹ Replacing onerous requirements and tight deadlines with more flexible grant structures would improve local jurisdictions' abilities to apply for and enact grant-funded projects.

Climate plan development and implementation raise significant procedural and substantive justice challenges that limit plan effectiveness

In federal and state environmental justice policy, procedural justice is commonly expressed as a requirement of “meaningful involvement” at the federal and state levels. EPA defines environmental justice as the “meaningful involvement of all people regardless of race, color, national origin or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies.”³⁵² Likewise, in 2019, AB 1628 revised California’s definition of environmental justice to include “meaningful involvement of people of all races, cultures, incomes, and national origins.”³⁵³ Assemblymember Robert Rivas introduced the bill to ensure that communities forced to bear a disproportionate burden of environmental harms have a voice in the planning process.³⁵⁴ “Meaningful involvement” is not only about conducting outreach and soliciting feedback from communities that suffer from greater harms, such as those who live in closer proximity to industrial areas, freeways, or other land uses, but also integrating that feedback in local planning and regulatory decisions.³⁵⁵

In addition to procedural justice, substantive justice – regarding the outcomes of decision making and policy – predominates in federal and state definitions. Accordingly, EPA definitions place “fair treatment ... of all people regardless of race, color, national origin or income” alongside meaningful involvement in the “development, implementation, and enforcement of environmental laws, regulations and policies.”³⁵⁶ California law provides additional elements of substantive justice.

1. Availability of a healthy environment for all people.
2. Deterrence, reduction, and elimination of pollution burdens for populations and communities experiencing the adverse effects of that pollution, so that the effects of the pollution are not disproportionately borne by those populations and communities.
3. Governmental entities engaging and providing technical assistance to populations and communities most impacted by pollution to promote their meaningful participation in all phases of the environmental and land use decision-making process.
4. At a minimum, the meaningful consideration of recommendations from populations and communities most impacted by pollution into environmental and land use decisions.³⁵⁷

California’s landmark legislation, Planning for Health Communities (SB 1000), further incorporates substantive justice into the local land use planning process, requiring municipalities to identify and address community-scale issues through targeted solutions.³⁵⁸ Under SB 1000, every jurisdiction has

³⁵¹ See Interviewee 39 on 11/12/2024.

³⁵² Angela C. Jones, U.S. *Environmental Protection Agency (EPA) Environmental Justice Activities and Programs*, CONGRESS.GOV (Feb. 13, 2024).

³⁵³ Cal. Gov. Code § 65040.12(e)(1)(2023).

³⁵⁴ Robert Rivas, *Environmental Justice Requires Meaningful Community Involvement*, CAL. ENV’T JUSTICE ALL. (Sept. 22, 2019), <https://ceja.org/wp-content/uploads/2020/01/BenitoLink.092219.pdf>, at 1-2.

³⁵⁵ *Environmental Justice in Local Land Use Planning*, CALIFORNIA OFFICE OF THE ATTORNEY GENERAL, <https://oag.ca.gov/environment/sb1000>.

³⁵⁶ See Jones, U.S. Environmental Protection Agency, *supra* n. 352.

³⁵⁷ Cal. Gov. Code § 65040.12(e)(2).

³⁵⁸ See SB 1000 Equity Toolkit, *supra* n 97.

the obligation to foster meaningful involvement of affected communities during each stage of the planning process:

1. Identify any “Priority Equity Communities” (PEC) when it adopts or updates two or more elements of its General Plan on or after January 1st, 2018. No action is required if no such communities are identified.
2. If one or more PEC are identified, then as part of its General Plan the jurisdiction must either:
 - (a) Create a separate Environmental Justice Element; or
 - (b) Integrate a set of related policies and objectives into other General Plan elements.
3. At minimum, the plan must address six topic areas to reduce the unique or compounded health risks in its identified PEC:
 - (a) Reduce pollution exposure, such as improving air quality and water quality.
 - (b) Promote public facilities, such as expanding parks, libraries, health facilities, and other infrastructure.
 - (c) Promote food access, such as expanding the number of grocery stores, farmers’ markets, and community gardens.
 - (d) Promote safe and sanitary homes, such as improving home air filtration, increasing access to affordable housing, and removing asbestos, mold, and lead-based building materials.
 - (e) Promote physical activity, such as improving street walkability and bikeability.
 - (f) Promote civic engagement, such as expanding language access and adopting participatory planning methods.
 - (g) Lastly, develop environmental justice goals, policies, and objectives for the jurisdiction’s General Plan to address the identified priorities in PEC.³⁵⁹

There is no uniform approach among California counties, cities, towns, and unincorporated communities to ensure meaningful involvement of residents most affected by environmental impacts and public health harms. Nearly every jurisdiction solicits feedback from the public and discusses doing so in its General Plan and, where available, CAP. However, virtually no jurisdictions consistently abide by best practices for meaningful involvement as identified by the California Office of the Attorney General.³⁶⁰ Lack of funding and staffing, difficult-to-reach populations, and other barriers preclude “meaningful involvement” in many jurisdictions. The sections below describe dynamics that arose during public outreach and engagement processes.

Local climate action planning approaches to “meaningful involvement” vary widely but are consistently below best practices

Community engagement in climate action planning varies considerably but nearly always falls short of the ideal as expressed in the California Attorney General’s best practices. Challenges abound, such as lack of interest, time, and means to participate; linguistic isolation and disability; cost; and availability of organizational networks as intermediaries. The problems begin with “the outreach portion” or “getting people to participate”³⁶¹ and continue with lack of capacity (funding and staff) to properly engage a jurisdiction’s disadvantaged communities.³⁶²

The California Department of Justice’s “Best Practices for Implementing SB 1000” suggests promoting engagement beyond the creation and implementation of planning documents, identifying engagement challenges, addressing language barriers, strengthening notification requirements, specifying that residents from disadvantaged communities should be recruited for boards or

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ Interviewee 19 on 10/8/2024, pg. 1.

³⁶² Interviewee 11 on 9/26/2024, pg. 4.

committees, and establishing progress-tracking procedures.³⁶³ In addition, under Government Code Section 65351, cities and counties “must provide opportunities for community input through public hearings and any other means a planning agency deems appropriate” during the creation or update of a General Plan.³⁶⁴ Because public outreach may be conducted through “any other means” the planning department deems appropriate, and because CAPs do not require public participation, approaches to engagement vary substantially within and across jurisdictions.³⁶⁵ Counties, cities, and towns explore a range of approaches to public participation. Some jurisdictions rely on a consultant-only approach. Some leverage local non-profit or community-based organizations. Others employ a mixture of consultants, community groups, and local government staff. Public involvement also varies based on the type of planning document; issues such as environmental justice and climate change in General Plans are addressed with some public input, whereas many CAPs do not involve the public.

Regardless of approach, “comprehensive engagement” was viewed as beyond the reach of most staff, due to factors such as cost, economic constraints among residents, difficult-to-reach populations, and lack of capacity. This resulted in excluding certain populations from participation, planning documents that do not address issues that are of import to the community, and continued disenfranchisement. A robust or “comprehensive” engagement process would involve considering potential barriers to engagement specific to each community, using multiple means to contact residents, ensuring all populations are heard, reaching residents from all regions of a county or local jurisdiction (including unincorporated areas) removing linguistic barriers for non-English-speaking residents, asking for assistance in prioritizing projects and actions, and other access considerations.³⁶⁶ In practice, jurisdictions use a variety of tactics,³⁶⁷ with most respondents reporting challenges to meaningful involvement.³⁶⁸

One of the primary challenges to public outreach was “significantly lower capacity” in staff resources and the budget for outreach efforts.³⁶⁹ Extensive outreach is costly, and consultants “can cater the outreach to the available funds.”³⁷⁰ Therefore, jurisdictions with less financial resources may simply forego a comprehensive engagement process. As respondents highlight, jurisdictions with lower capacity also struggle to connect with a less engaged public.

Whenever you're in an impoverished community, an indigent community, people are not getting caught up in local government. They're not responding to emails. They're not attending Town Hall meetings. Some of them have two jobs. They work night yard jobs, right? They work swing shifts at factories. They don't have 8 to 5 jobs. A lot of these families work on Saturdays and Sundays in the fields. And so public outreach is tough. So, when I say it's brutal. Public outreach is brutal.³⁷¹

³⁶³ Best Practices for Implementing SB 1000, *supra* n. 220, at 17-18.

³⁶⁴ *State of California General Plan Guidelines, Chapter 3: Community Engagement and Outreach*, GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (2017), https://lci.ca.gov/docs/OPR_C3_final.pdf, at 26.

³⁶⁵ *Id.*

³⁶⁶ Interviewee 22 on 10/17/2024, pg. 8.

³⁶⁷ Interviewee 27 on 10/28/2024, pg. 5.

³⁶⁸ Interviewee 36 on 11/7/2024, pg. 4.

³⁶⁹ Interviewee 11 on 9/26/2024, pg. 4.

³⁷⁰ Interviewee 3 on 9/6/2024, pg. 3.

³⁷¹ *Id.*

What I would say is the flip side of that is that the people who tend to participate tend to be more affluent. Right? They have the leisure time after dinner to participate, or on a weekend. They're not working 2 to 3 jobs. And so, we have to be very cognizant of balancing online opportunities with outreach to the harder to reach segments of the population that are working multiple jobs or not speaking English as a first language. And so, we complement that with sort of pop-up outreach piggybacking on maybe things that are already happening in the community, events where people are going to the—seniors are going to the library, and so we'll go there to meet them where they are and get and get input or other people.³⁷²

Jurisdictions with a lower budget for engagement may be those that require more resources, due to difficult-to-reach populations. In turn, affluent residents and communities dominate the engagement process.

Community engagement remains largely absent from later CAP development and implementation stages

Community engagement often centers on gathering community feedback during early-stage CAP development. Latter stages – evaluating and choosing among CAP strategies; preparing and finalizing plans; monitoring CAP implementation; evaluating CAP implementation; and, based on public understanding and organizational learning, deciding when and to what extent to revise or update a CAP – see substantial or complete absence of community involvement. Critical stages of participation that would allow the public to understand, contribute to, and select among available climate action strategies; evaluate them in light of state policies and incentives; and monitor them for purposes of enforcement, learning, and plan revision, are absent. Community engagement during the implementation stages is crucial to ensure that CAP projects are aligned with the public's concerns and local governments held accountable to policies put forth in the plan. Additionally, AB 1628 defines “meaningful involvement” as “meaningful participation in all phases of the environmental and land use decision-making processes,” including the implementation phase.³⁷³ Therefore, community involvement is necessary throughout all phases of the CAP process.

There are several reasons for lack of community engagement, especially during implementation stages. First, unlike General Plans, which require public participation under Government Code Section 65351, CAPs are not mandatory and therefore do not have community engagement obligations. Second, CAPs are often highly technical, focused strictly on GHG emissions reduction, or based on measures and strategies adopted from a set list of options. The technical content and standardized approach are barriers to meaningful involvement, due to the difficulty explaining information and incorporating public feedback. Lastly, community engagement before, during, and after CAP creation requires financial and staff resources that many jurisdictions lack. One respondent described the difficulty of engaging communities on plans that are bogged down in administrative processes or use a fixed scope of action:

Resident representatives are not necessarily engaged to their fullest. They kind of get invited to really wonky bureaucratic discussions where they're sort of out of the loop on a lot of the details of what people are talking about, because it's so administrative. And so, they're there, but they're not really contributing that meaningfully. And then the ways in which they want to contribute, like big ideas, like kind of help me envisioning next steps are kind of moot to the conversation, because we have these really fixed scopes of work with the state that we have to implement this way, now is not the moment

³⁷² Interviewee 3 on 9/6/2024, pg. 4.

³⁷³ Cal. Gov. Code § 65040.12(e)(1)(2023).

where we're collecting feedback about what we could be doing differently in terms of different projects or different scopes. So, there's kind of a tension I've noticed in the communities about how residents are engaged, and whether it's that meaningful.³⁷⁴

Despite the barriers to engagement throughout the climate action planning process, several interviewees highlighted helpful procedures for continuing to involve the public after a plan is adopted. For example, one interviewee described completing “more outreach and workshops and connecting with community-based organizations” after completing a Climate Action Plan update.³⁷⁵ They described their plans to create a dashboard, accessible via the internet, to keep community members up-to-date and solicit ongoing feedback:

We want to be as transparent as possible with keeping them informed as to what we're doing. Their voice will be heard and actually be a very significant factor in how the decisions and strategies that we choose, and we also plan to have some sort of a dashboard or website where we can have real time information and updates on meeting minutes, discussions that we've had, and even hopefully, an option on a portal where they can submit an online survey, provide their feedback. And also, I've seen some examples from other cities where they have real time, showing progress. They're showing graphs, analysis on how the measures that are being implemented are actually affecting change to reduction in certain sectors and areas. So hopefully, we can do something on that scale as well.³⁷⁶

Even when communities are engaged in the CAP drafting process, most jurisdictions do not use similar engagement tools once the CAP is adopted, such as workshops, connecting with non-profit networks, and public-facing information. Some interviewees relied on environmental justice committees or advisory groups to provide ongoing feedback and engagement. For example, one respondent stated that they wanted to “lean on [their] EJ committee, as well as other relationships built throughout the community.”³⁷⁷ Leveraging these relationships and maintaining committees after plan adoption allowed them to maintain outreach efforts while planning actions were implemented. One respondent describes a process called “community climate conversations,” that occurred approximately ten times per year:³⁷⁸ “And that’s where we really discuss, what do you need in your neighborhood? What would help you feel like you’re connected to this work?”³⁷⁹ These types of public conversations can ensure CAP implementation processes consider community needs when prioritizing actions. Continued public outreach also serves as a crucial accountability measure to keep CAP projects on track. State policy and funding should support local jurisdictions in utilizing comprehensive engagement strategies, before and after CAPs are adopted.

Inevitable prioritization among actions introduces challenges for community engagement in plan development and implementation

Once potential planning actions are identified and later adopted, community engagement can play a crucial role in prioritizing which policies and actions to implement. While some respondents discussed how community priorities can be embedded within the structure of a plan, others noted that prioritization involves a continuous balancing. In addition, the order of implementation can in practice follow which funds are available and what measures city councils are willing to implement.

³⁷⁴ Interviewee 14 on 10/1/2024, pg. 4.

³⁷⁵ Interviewee 39 on 11/12/2024, pg. 2.

³⁷⁶ *Id.* at 5.

³⁷⁷ Interviewee 17 on 10/4/2024, pg. 4-5.

³⁷⁸ Interviewee 41 on 11/13/2024, pg. 3.

³⁷⁹ *Id.*

AB 1628's definition of "environmental justice" includes "[a]t a minimum, the meaningful consideration of recommendations from populations and communities most impacted by pollution into environmental and land use decisions."³⁸⁰ Prioritizing policies and projects most supported by the public would incorporate AB 1628's mandate to consider community recommendations and involve the public in land use decisions. Continued engagement during each prioritization process is crucial to achieving the state's environmental justice policies.

Ad hoc attempts to prioritize among climate actions abound. For example, one planner explained that they "can use the community priorities to structure the plan" by using each priority as the basis for a chapter and a "thematic organization" for a General Plan.³⁸¹ Similarly, one respondent explained that they "asked the community to help us prioritize" among "77 different environmental goals."³⁸² Another noted that prioritization is a balance among community-identified concerns, "internal priorities," and "what our board of supervisors priorities were [...] during the development of the CAP."³⁸³ However, as they further explained:

We are trying to prioritize things, internally. So, we have, I think, about 94 or 95 actions. Which is a lot, and then also, they're going to be implemented by the different departments in our county, and then also, it depends on funding availability. And so, we try to prioritize and rank which—we ranked all of the different actions based on—let's see, I have my list here. We based it on the timeframe that's listed in the CAP. We also based it on whether it's an ongoing project. We included actions that the county was already working on so that we could kind of take credit for the work that has been done or is ongoing. We also based it on whether it's related to a sustainability plan action and then we also have what we call a core measure. So, the core measures in the CAP, there are about 5 core measures where, based on our calculations, these 5 measures will contribute to 85% of the reductions, I think, by 2035. These are going to be the most bang for your buck. So, we wanted to prioritize that. Based on these kinds of qualifiers, we ranked our actions. And based on this ranking, we'll try to get the funding for these actions as soon as we can. And then, also start to direct the departments to start working on these actions.³⁸⁴

This typifies what a jurisdiction considers when prioritizing among CAP measures. CAP measures that yield greater short-term emissions reductions or that provide greater GHG emissions reductions per dollar swamp other considerations, a reality that some planners are "moving away from"³⁸⁵ to prioritize actions that benefit communities via a quantified co-benefit score for each action. The score "is based on what we heard from community members, and especially in disadvantaged, low-income communities where we did outreach in understanding what co-benefits, better air quality, reduced transportation costs, etc., are really important, and then prioritizing the actions based on that."³⁸⁶ Under current levels of funding, local governments may be unable to prioritize policies and identify projects of greatest importance to the public in this way.³⁸⁷ Due to existing constraints on climate action planning prioritization, including available funds and staffing, direction from city councils and boards of supervisors, and a focus on short-term emissions reduction or GHG emissions per dollar among ongoing projects, community engagement may fall short of the state's

³⁸⁰ Cal. Gov. Code § 65040.12(e)(1)(2023).

³⁸¹ Interviewee 3 on 9/6/2024, pg. 2.

³⁸² Interviewee 17 on 10/4/2024, pg. 4-5.

³⁸³ Interviewee 25 on 10/22/2024, pg. 2-3.

³⁸⁴ *Id.* at pg. 6.

³⁸⁵ Interviewee 41 on 11/13/2024, pg. 11.

³⁸⁶ *Id.*

³⁸⁷ Interviewee 32 on 11/4/2024, pg. 3.

requirement of “meaningful” involvement that allows the public to participate in decision-making as described in AB 1628 and SB 1000.

Tailoring of climate actions is hindered by boilerplate and lack of outreach

Beyond selecting and prioritizing among available strategies and actions, the process of “tailoring” actions to community conditions and character was often described as insurmountable. A CAP that meets the requirements of CEQA Guidelines Section 15183.5(b) and adopted through CEQA review becomes a “CEQA-qualified CAP.”³⁸⁸ Jurisdictions may follow these criteria because CEQA-qualified CAPs “allow eligible projects to streamline their determination of significance for GHG emissions,” removing costly barriers to construction and development projects.³⁸⁹ Guidance from the state, including CARB’s Scoping Plan, advise jurisdictions to focus on three priority areas when creating CEQA-qualified CAPs, including transportation electrification, VMT reduction, and building decarbonization.³⁹⁰ Due to their technical nature, and to meet specific legal criteria, most CAPs are completed by consulting firms that use standard templates and draw from similar lists of strategies.

While standardization can assist planners in document creation and comparing efforts across the state, some degree of tailoring is needed to ensure that community context and concerns are addressed. For example, one respondent described tailoring solutions during the initial engagement process as helpful “not just for them to buy into our ideas, but for us to hear what problems people are facing and make sure our ideas are actively trying to solve them.”³⁹¹ Another explained that this tailoring process is important, because communities face diverse impacts and hazards and may have priorities that differ from neighboring jurisdictions, from pesticide application to internet access to illegal dumping to industrial land uses and truck routes.³⁹² Tailoring solutions to community needs is especially important to “ground truth” data. Respondents expressed growing confidence that data used to develop CAPs does not accurately depict the totality of a community’s concerns.³⁹³

Despite the importance of tailoring solutions to specific communities, certain features of the CAP development process impede such tailoring. First, CAPs often draw from the same group of measures or strategies due to their specific goal of reducing GHG emissions and the CEQA and state guidance framework in place. One respondent described the difficulty of having the same set of options while attempting to specify them for each community: “Everyone knows” that “[i]t’s essentially the same batch of actions.”³⁹⁴ However, they clarified that even if “you’re not necessarily coming up with new solutions in every community,” you should be “coming up with tailored solutions to meet the needs of that community.”³⁹⁵ Additional outreach to find tailored solutions and enact the strategies themselves is costly, time-consuming, and requires political agreement. Tailoring solutions to a community involves not only responding to information shared during the

³⁸⁸ 2022 Scoping Plan, Appendix D, CAL. AIR. RES. BD., *supra* n. 114, at 8.

³⁸⁹ *Id.*

³⁹⁰ *Id.* at 9.

³⁹¹ Interviewee 39 on 11/12/2024, pg. 2.

³⁹² Interviewee 31 on 10/30/2024, pg. 7.

³⁹³ Interviewee 41 on 11/13/2024, pg. 9-10.

³⁹⁴ Interviewee 44 on 11/20/2024, pg. 4.

³⁹⁵ *Id.*

outreach process but also assessing and confirming the feasibility of each measure based on jurisdictional resources and particularities.

Failure to follow best practices of integrating community engagement in early scoping stages, even before the retention of consultants, creates further obstacles because it limits the scope of options. One interviewee suggested that jurisdictions engage community members before writing the request for proposals and budget for a new plan: “I would like to see local agency staff develop the scope of work and the request for proposals in a more collaborative and transparent process, because by the time I get involved the scope is set, the budget’s set, and there’s not often space for change.” They emphasize the importance of conducting community engagement before the drafting process to ensure sufficient scoping of projects up front.³⁹⁶

Lack of data for communities to ascertain and advance interests

As mentioned above, the stages of plan development and implementation that should involve community engagement include choosing strategies and policies, creating and adopting plans, monitoring and reporting on implementation efforts, and revising implementation actions where necessary. One of the dynamics at play during these phases centers around who is gathering and presenting the information that serves as the foundation for planning documents. Respondents discussed the importance of community-generated data, both to augment government data and provide a more localized picture of community impacts: “Some communities are using commercially available PM_{2.5} monitors to look at air quality, and they’ll deploy them within the community in a grid, so that they can do their own air monitoring at a meaningful local scale.”³⁹⁷ They reiterated the nexus between community data and advocacy after providing a community with sufficient air and water quality monitoring tools: “You have a special temporal database, and you can see where there are hotspots, where water doesn’t meet standards for example.”³⁹⁸ Providing opportunities for accessible and affordable community monitoring can improve the public’s spatial and temporal understanding of the context in which climate actions take place, which lends itself to more robust advocacy. Soliciting data from communities is especially important in disadvantaged communities, where governments struggle with outreach and community-based organizations and non-profits try to fill the gap:

There’s been very little outreach to go out to fence-line communities like Nyland, Calipatria, and Bombay Beach. But [REDACTED] has tried to go out there and advocate and try to bring out leaders from their communities to speak and advocate for themselves. We try to give them platforms as well. We take translation, but what we found is some of those areas are less Hispanic, maybe a little bit more African American and a lot whiter. But they’re still disenfranchised, because they are literally about 50 miles away from the county seat, which is El Centro, and the only transportation they have there is once a week— [...] The nearest hospital is [...] Brawley, which is like 45 minutes away. By the time they get there and come back—there’s no urgent care centers. There’s no clinics. They recently created a volunteer fire department [...] they’re not living in the 21st Century. It’s a different world.³⁹⁹

Along with informing the public, accepting community-generated data creates a two-way information exchange between local governments and residents. Supporting communities so that

³⁹⁶ Interviewee 13 on 9/30/2024, pg. 14.

³⁹⁷ Interviewee 43 on 11/15/2024, pg. 9.

³⁹⁸ Interviewee 24 on 10/21/2024, pg. 17.

³⁹⁹ Interviewee 1 on 9/5/2024, pg. 12.

they can advocate for themselves during the planning process can lead to actions and projects that better address community needs.

Overdependence on consultants

Many respondents discussed relying on municipally paid consultants to complete their planning documents. This can result in plans that are “template”-based and involve “really wonky bureaucratic discussions where they're out of the loop on a lot of the details of what people are talking about, because it's so administrative.”⁴⁰⁰ Non-profits and other organizations can bridge this gap and better reflect community priorities. However, some communities do not have a strong CBO network that has built close ties with residents: “We’re a pretty small region, and there’s not a ton of non-profits or CBOs.”⁴⁰¹ This can hinder outreach efforts. Where they do have a presence, partnering non-profit have the “major responsibility” of “helping boost community engagement.”⁴⁰² In lieu of such networks, jurisdictions turn to consultants.

It takes so much time and building connections, too. [...] [W]e've been building over the past 10 months. But that doesn't mean there isn't a lot more to do. So that when I'm like, we need to do that. And you need to hear from them, I have that person that's in the community who's a trusted source, who then also trusts me to help disseminate information. So, I think that's really the next step for me, building community relationships while figuring out how to prioritize what we need to do, and then figuring out the funding and staffing and expertise, whether or not we need to hire a consultant, or we can do it in house, and all of that.⁴⁰³

Sometimes consultants are necessary to fill expertise and outreach gaps. However, consultants are expensive, especially for smaller, under-resourced jurisdictions. One respondent noted that they “literally have to plan years in advance to identify the funds to hire consultants.”⁴⁰⁴ This is especially challenging because consultant fees are not scaled to a jurisdiction’s financial standing. They are “paying the same rates” and “using the same consultants” yet their “capacity is significantly lower, and our public outreach is a little more difficult.”⁴⁰⁵

Under-resourced jurisdictions are at a disadvantage compared to larger, wealthier jurisdictions; they must meet the same statutory requirements that require new or updated General Plan Elements, such as SB 1000 and SB 379, but face steeper comparative costs when hiring a consultant. Growing state requirements also increase the odds that a local government will rely on consultants.

There are more than enough State of California laws affecting local land use and environmental planning, from where I sit. There's not a jurisdiction out there that can navigate this framework without consultant assistance, and that's not sustainable for a lot of jurisdictions. It's the regulatory framework of planning and land use, environmental, is incredibly complicated in California. And if you don't hire lawyers and consulting planners, you're probably going to get sued if you take on a big project or a comprehensive planning document. And in the cities that can't afford to do that, all the money will be spent on lawsuits and not actually doing and implementing the planning and climate action strategies that need to be done.⁴⁰⁶

⁴⁰⁰ Interviewee 14 on 10/1/2024, pg. 4.

⁴⁰¹ Interviewee 39 on 11/12/2024, pg. 3.

⁴⁰² Interviewee 27 on 10/28/2024, pg. 4-5.

⁴⁰³ Interviewee 32 on 11/4/2024, pg. 5.

⁴⁰⁴ Interviewee 11 on 9/26/2024, pg. 4.

⁴⁰⁵ *Id.*

⁴⁰⁶ Interviewee 13 on 9/30/2024, pg. 8.

Because of the many technical state requirements and the time, expertise, and staff needed to address them, jurisdictions over-rely on consultants who may not know the community as well as local government actors or organizations.

Limited use of environmental justice metrics and indicators

Environmental justice indicators are essential tools for understanding which communities are facing the impacts of environmental pollution and health problems and tracking how policies can address these disparate impacts across communities. Indicators help local governments identify environmental risks, track progress, and create policies to fix problems. Jurisdictions that adopt indicators benefit in several ways: 1) they are more likely to qualify for federal and state funding; 2) they make better, data-driven decisions about environmental justice policies; 3) they improve public accountability by tracking progress; and 4) they ensure fairness in how environmental protections are distributed. Common environmental justice indicators fall into two categories that can be analyzed together: pollution and exposure indicators and sensitive population indicators. Pollution and exposure indicators include air quality measures such as ozone, PM_{2.5}, Diesel Particulate Matter, drinking water contaminants, and pesticide use. Sensitive population indicators may consider asthma, cardiovascular and other chronic disease burden, low birth weight, age, educational attainment, low-income households, linguistic isolation, poverty, and unemployment. In addition to these indicators (sourced from CalEnviroScreen),⁴⁰⁷ distribution indicators can measure, among others, access to healthcare, green space, access to public transportation, and waste management.⁴⁰⁸

Utilizing consistent environmental justice indicators allows jurisdictions to set clear goals and track progress by first setting a quantitative baseline, a starting point or reference measurement for outcomes such as air quality or health disparities in and across communities. Despite their importance, many jurisdictions fail to adequately incorporate indicators in CAPs.⁴⁰⁹ A review of CAPs and General Plan elements across San Joaquin Valley and Southern California jurisdictions reveals inconsistent application of environmental justice indicators. This undermines the ability of local governments to effectively target and mitigate environmental inequities. Additionally, the choice of indicator is inconsistent within plans and environmental justice tools that do consider them. Without a clear and consistent way to measure environmental health and other disparities, local governments struggle to create strong policies that purport to reduce environmental harm and protect vulnerable communities. Interviewees noted that indicators improve evaluation and future decision-making.⁴¹⁰ They highlighted the use of indicators as a way to show commitment to sustainability and equity goals, demonstrate progress, and inform future climate actions.

What the community really wanted to see is growth that happens in ways that are both sustainable and equitable. And so, we have this chapter upfront that sort of frames the challenges and includes a set of indicators. We have about a dozen indicators of what the city is going to track and a commitment with the annual General Plan review to report out on progress on those indicators. [...] it really identifies indicators, and realistic indicators, too, with data points that the city will be able to get easily and report

⁴⁰⁷ *CalEnviroScreen 4.0*, OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT (Oct. 2021),

<https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>.

⁴⁰⁸ Esther Min et al., *Quantifying the Distribution of Environmental Health Threats and Hazards in Washington State Using a Cumulative Environmental Inequality Index*, 14(4) ENVTL. JUSTICE 298 (2021).

⁴⁰⁹ H. Caggiano et al., *U.S. Cities' Integration and Evaluation of Equity Considerations into Climate Action Plans*, 3 NPJ URBAN SUSTAIN. 50 (2023).

⁴¹⁰ Interviewee 16 on 10/3/2024, pg. 24.

out to the community in a way that is really going to demonstrate where the progress is or is not, and that's going to inform corrective actions.⁴¹¹

Jurisdictions that identify and employ realistic indicators tend to hit a wall as they combine qualitative and quantitative elements: “qualitative metrics for us haven’t been as successful in telling the story.” They find it difficult to address co-benefits in particular, and gravitate toward placing “a stronger weight on [...] quantitative metrics that makes it difficult for us to continue pushing forward co-benefits, which are very qualitative in nature.”⁴¹² Balancing quantitative and qualitative indicators, developing precise methodologies, overcoming burdensome data gathering and digital infrastructure demands, ensuring data accuracy, and maintaining uniform indicators across jurisdictions are beyond the reach of smaller, rural, and under-resourced jurisdictions.⁴¹³ Because many jurisdictions lack robust indicators to determine which ongoing efforts have neutral or negative effects on equity outcomes, they adopt “equity guideposts” or shortcuts to consider climate action outcomes.

Recommendations

Based on our review of the existing literature, local planning documents in Southern California and the San Joaquin Valley, interviews, and contributions from workshop participants, the State of California should work with local and regional governments to develop the following measures. Each is raised in light of one or more of the internal or cross-agency governance challenges described above. Substantively, these recommendations seek to:

1. Support ambitious local climate action planning;
2. Ensure robust local implementation of existing plans;
3. Advance inter-local coordination in plan development and implementation; and/or
4. Promote state interventions that leverage state competencies in standard setting and information dissemination while continuing to leverage the advantages of primarily local implementation.⁴¹⁴

Provide state guidance to local governments to resolve conflicts of climate action planning prioritization.

We outlined major conflicts among housing, transportation, water, climate, and environmental justice laws and policies. For example, infill development may further housing and climate goals but frustrate water conservation and open space efforts. Ensuring housing is built near recreational areas and away from industrial land uses that degrade a healthy environment can further fair housing and environmental justice goals, while de-clustered housing can increase VMT and conflict with GHG reduction goals. State housing laws create “real, meaningful trade-offs between the location of that housing and potential climate issues, as well as access to opportunity issues.”⁴¹⁵ Local governments have to contend with these conflicts while keeping up with new mandates via updates to policies and zoning codes.⁴¹⁶

⁴¹¹ Interviewee 3 on 9/6/2024, pg. 13.

⁴¹² Interviewee 41 on 11/13/2024, pg. 13.

⁴¹³ Interviewee 14 on 10/1/2024, pg. 10.

⁴¹⁴ Camacho & Marantz, *supra* note 10, at 129-30.

⁴¹⁵ Interviewee 44 on 11/20/2024, pg. 12.

⁴¹⁶ Interviewee 44 on 11/20/2024, pg. 12; *see also* Interviewee 45 on 11/25/2024, pg. 10; *see also* Interviewee 30 on 10/29/2024, pg. 5; *see also* Interviewee 39 on 11/12/2024, pg. 12; *see also* Interviewee 1 on 9/5/2024, pg. 15; *see also*

Guidance could take a wide range of forms. Examples include:

- Decision-making rubrics as a tool to help local jurisdictions balance statutory requirements and objectives.⁴¹⁷ Decision-making rubrics could also help jurisdictions consider state objectives in light of local conditions including density and geography.⁴¹⁸
- The state might provide advice on how to consider tradeoffs in urban versus rural settings.
- The state could provide clear pathways for environmental justice concerns to be given weight alongside competing objectives.
- The rubrics should be updated regularly to identify where new requirements overlap, conflict, or complicate a jurisdiction's current policy mix.
- The rubrics should be presented to the state legislature to limit potential conflict and unintended consequences of future legislation.⁴¹⁹
- A state-level map of climate and environmental justice policy, such as the *California Climate Action Legal Tools* document forthcoming from UC Irvine School of Law, would further assist local governments in: 1) understanding state requirements, 2) framing decisions in the context of conflicting state policies, and 3) understanding the interplay of objectives and required timelines.

Reform California Public Utilities Commission (CPUC) practices to encourage renewable energy infrastructure and accessibility in local climate action planning.

Interviewees and workshop participants discussed the importance for local climate action planning of reforming public utility and CPUC practices to better align with climate change and environmental justice goals.⁴²⁰ Recommendations by interviewees, participants, and the literature are wide ranging:

- Improve grid capacity and reliability to ensure it is able to support an increase in electricity use.⁴²¹ This is crucial to support CAPs, because most on-site GHG mitigation efforts included in climate action planning involve renewable energy electricity generation, all-electric building design, and EV charging connections.⁴²² Under CARB's recommendations for local climate action and decarbonization, "the role of electricity in powering the economy will grow in almost every sector," necessitating expanded, reliable grid access.⁴²³
- Reform CPUC by encouraging profits for renewable energy infrastructure and decreasing electricity rates.⁴²⁴ In order to ensure renewable energy policies in CAPs do not further entrench inequities, electricity rates must be affordable. CARB has noted that "[e]nsuring that vulnerable

Interviewee 40 on 11/13/2024, pg. 21; *see also* Interviewee 31 on 10/30/2024, pg. 16; *see also* Interviewee 32 on 11/4/2024, pg. 13; *see also* Interviewee 25 on 10/22/2024, pg. 10.

⁴¹⁷ *See* Workshop Transcript Notes, Innovative and Equitable Climate Action Policy Workshop, UC Irvine School of Law (June 30, 2025) (IECA Workshop Transcript Notes).

⁴¹⁸ *See id.*

⁴¹⁹ *Id.*

⁴²⁰ Interviewee 39 on 11/12/2024, pg. 12; *see also* Interviewee 42 on 11/15/2024, pg. 5; *see also* Interviewee 1 on 9/5/2024, pg. 13; *see also* IECA Workshop Transcript Notes, *supra* n. 417.

⁴²¹ Interviewee 22 on 10/17/2024, pg. 17; *see also* Interviewee 37 on 11/11/2024, pg. 11; *see also* Interviewee 32 on 11/4/2024, pg. 5.

⁴²² 2022 Scoping Plan, Appendix D, CAL. AIR. RES. BD., *supra* n. 114, at 29.

⁴²³ 2022 Scoping Plan, *supra* n. 128, at 195.

⁴²⁴ *See* Interviewee 39 on 11/12/2024, pg. 3 & 12.

communities benefit from efforts to reduce GHG emissions is crucial to the state’s climate strategy.”⁴²⁵

- Expand the scope of what it considers relevant climate risks beyond extreme weather events.⁴²⁶ CPUC’s 2024 Order Instituting Rulemaking to Update Rules for the Safety, Reliability, and Resiliency of Electrical Distribution Systems cites extreme weather events as a climate risk. However, the Institute for Policy Integrity suggests that CPUC “clarify that the scope of relevant climate risks and impacts includes chronic environmental changes” including rising temperatures, sea level rise, and “implications for daily grid operations and long-term planning.”⁴²⁷ This could improve CPUC’s understanding, consideration, and response to state and local climate actions. Ensuring relevant climate risks are considered will better prepare the grid for “daily operations and long-term planning.”⁴²⁸ As mentioned above, a reliable energy grid is essential for the success of CAP measures that focus heavily on electricity-related GHG mitigation measures.
- Prioritize distributed energy resource (DER) programs that focus on non-energy benefits such as safety and reduced GHG emissions.⁴²⁹ CPUC distributes public funds for DERs, including solar panels, EV charging stations, and energy efficiency upgrades, based on “a narrow definition of cost-effectiveness such as calculating the ‘avoided costs’ of energy distribution and generation resulting from energy efficiency programs.”⁴³⁰ Instead, they could “account[] for ‘non-energy benefits’ such as health, safety, comfort, and tenant retention in these regulatory decisions” to ensure DERs are distributed equitably to low-income and disadvantaged communities.⁴³¹ This change will improve “the extent to which low-income and disadvantaged communities benefit from the CPUC’s resources,” furthering distributive justice goals that are important to climate action planning.⁴³²
- Encourage infrastructure updates in disadvantaged communities.⁴³³ Disadvantaged communities often lack the infrastructure to make use of DERs. Therefore, the state could mandate CPUC to update infrastructure in disadvantaged communities to prevent further inequities of adoption.⁴³⁴ This would improve the accessibility of CPUC resources to communities that may not otherwise be able to afford or accommodate renewable energy infrastructure. Many CAP measures related to renewable energy require updated infrastructure, such as solar panels and energy efficiency measures. Therefore, this will help ensure that CAP measures related to renewable energy and infrastructure are able to be enacted in disadvantaged communities.

⁴²⁵ 2022 Scoping Plan, Appendix D, CAL. AIR. RES. BD., *supra* n. 114, at 5.

⁴²⁶ *Joint Comments to the California Public Utilities Commission on Safety, Reliability, and Resilience Rules for Electrical Distribution Systems*, INSTITUTE FOR POLICY INTEGRITY (2024), <https://policyintegrity.org/projects/update/joint-comments-to-the-california-public-utilities-commission-on-safety-reliability-and-resilience-rules-for-electrical-distribution-systems>.

⁴²⁷ *See id.*

⁴²⁸ *Id.*

⁴²⁹ Tricia Light et al., *Advancing Equity in Access to Distributed Energy Resources in California*, 20(1) J. SCIENCE POLICY & GOVERNANCE (2022).

⁴³⁰ *See id.*

⁴³¹ *Id.*

⁴³² *Id.*

⁴³³ *Id.*

⁴³⁴ *Id.*

- Promote Community Choice Aggregators (CCA) over Investor-Owned Utilities (IOUs).⁴³⁵ Criticism of CPUC has centered on its relationship with Investor-Owned Utilities (IOUs), which, despite record profits, increase consumer rates and fail to take financial accountability for their role in wildfires.⁴³⁶ IOUs dominate electricity across the US, serving almost 70% of all electric service customers.⁴³⁷ These utility companies are privately owned.⁴³⁸ Alternatively, Community Choice Aggregators (CCAs) are locally-led energy providers that are “governed by boards of elected officials who are supposed to engage communities and allow them to lead.”⁴³⁹ CCAs hold the potential to democratize energy, improve consumer rates, and remodel CPUC’s relationship with IOUs. They can also address a key issue raised by workshop participants: most local jurisdictions are not “full-service,” meaning they are not in control of a majority of their GHG emissions.⁴⁴⁰ Expanding the use of CCAs would place control over a larger portion of GHG emissions in the hands of the communities responsible for creating and implementing emissions reduction policies.⁴⁴¹ The California Environmental Justice Alliance suggests that CCAs partner with community-based organizations, provide accessible information and outreach, utilize transparent decision-making, and ensure local and state accountability.⁴⁴² This will shift energy decision-making away from privately-owned IOUs and toward community-led CCAs. CCAs face several challenges, including policy decisions regarding cost sharing between CCAs and IOUs and assessments of transmission and delivery fees.⁴⁴³ Any shift to CCAs will be made as the state struggles with expanding and updating the grid, ensuring resilience to extreme weather events, mitigating impacts to land use and biodiversity, and meeting a cost of roughly \$30.5 billion over twenty years in order to meet projected electricity demand.⁴⁴⁴ Enacting equity-focused, democratized energy provision through CCAs will ensure that policies involving utilities further both GHG mitigation and community-driven goals of local CAPs.

⁴³⁵ Deborah Behles et al., *Building a Just Energy Future: A Framework for Community Choice Aggregators to Power Equity and Democracy in California*, CAL. ENVTL. JUST. ALL., <https://ceja.org/wp-content/uploads/2020/11/CEJA-CCA-REPORT-SINGLE-PAGE.pdf>; see also Al Weinrub, *Power to the People: Why We Need Energy Justice*, NONPROFIT QUARTERLY (Fall 2021), https://shutesbury.org/sites/default/files/offices_committees/ecac/2803_NPQ_Weinrub.pdf.

⁴³⁶ See Lynch, *supra* n. 102.

⁴³⁷ Job Taminiau & John Byrne, *California’s Community Choice Movement and a Future of Public Energy Governance*, 206 ENERGY POL’Y 114748 (2025).

⁴³⁸ *Id.*

⁴³⁹ See Behles et al., *supra* n. 435, at 5.

⁴⁴⁰ See IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁴¹ See *id.*

⁴⁴² See Behles et al., *supra* n. 435, at 6-8.

⁴⁴³ J.R. DeShazo, Julien Gattaciecceca, & Kelly Trumbull, *The Promises and Challenges of Community Choice Aggregation in California*, UCLA LUSKIN CENTER FOR INNOVATION (2017), https://innovation.luskin.ucla.edu/wp-content/uploads/2019/03/The_Promises_and_Challenges_of_Community_Choice_Aggregation_in_CA.pdf, at 29.

⁴⁴⁴ Jane Long, Rhianna R. Hohbein, & Miriam Aczel, *Key Challenges for California’s Energy Future: A Primer for Energy Policy*, CALIFORNIA COUNCIL ON SCIENCE & TECHNOLOGY (April 2025), <https://ccst.us/wp-content/uploads/CCST-Key-Challenges-for-Californias-Energy-Future.pdf>, at 11.

Electrify state building codes to address overlapping, conflicted, and uncoordinated planning priorities.

As discussed above, interviewees and policy workshop participants had to stall decarbonization efforts and revise their Climate Action Plans after the *Berkeley* ruling.⁴⁴⁵ Then, AB 130 “pause[d] updates to state and local building codes [...]” for six years and prevented local jurisdictions from creating their own reach codes for residential buildings with limited exceptions.⁴⁴⁶ Before AB 130, “the [California Building Standards] Commission was required to publish an updated building code every three years and supplement, as necessary, in the intervening period.”⁴⁴⁷ Reach codes are among California’s “best tools for increasing climate resilience, cutting pollution, lowering energy bills and protecting public health.”⁴⁴⁸ Given feedback from interviews and workshop participants, a potential strategy would be to electrify state building codes via the California Building Standards Commission. AB 130’s pause on building code updates could be amended to allow for this work to continue. Only through state-level building codes will jurisdictions without the capacity and resources to achieve electrification and GHG emissions reduction be able to meet climate change goals and improve their efficiency and affordability of energy provision. Addressing the pause on building code updates under AB 130 and the *Berkeley* ruling’s chilling effect on ambitious local reach codes is a heavy lift but may be an essential element of effective climate action planning.

Reform groundwater policy to address overlapping, conflicted, and uncoordinated planning priorities.

Policy workshop attendees noted challenges posed by water regulations that potentially conflict with housing laws.⁴⁴⁹ Interviewees pointed to the potential for SGMA to raise tensions between large farms and residents who cannot access groundwater within irrigation districts.⁴⁵⁰ Under SGMA, “any local agency or combination of local agencies overlying a groundwater basin” can become a Groundwater Sustainability Agency (GSA).⁴⁵¹ Local agencies include cities, counties, and water districts. However, landowners have succeeded in navigating local approval processes to form their own water districts,⁴⁵² enabling them to extract large amounts of water while regulating water usage and determining sustainable withdrawal amounts for the subbasin.⁴⁵³ In addition to SGMA and

⁴⁴⁵ Interviewee 39 on 11/12/2024, pg. 2; *see also* Interviewee 32 on 11/4/2024, pg. 12; *see also* Interviewee 13 on 9/30/2024, pg. 10; *see also* Interviewee 33 on 11/4/2024, pg. 10; *see also* IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁴⁶ Alison F. Takemura, *California Halts Building Code Updates in a Blow to Electrification*, CANARY MEDIA (Aug. 4, 2025), <https://www.canarymedia.com/articles/carbon-free-buildings/ca-ab-130-code-housing>.

⁴⁴⁷ *AB 130 Places New Limitations on Building Code Updates for Residential Buildings*, BROWNSTEIN (July 28, 2025), <https://www.bhfs.com/insight/ab-130-places-new-limitations-on-building-code-updates-for-residential-buildings/>.

⁴⁴⁸ David Cohen & Vicki Veenker, *If California Pauses New Local Building Codes, It Risks Slowing Climate Progress*, CALMATTERS (July 25, 2025), <https://calmatters.org/commentary/2025/06/if-california-pauses-new-local-building-codes-it-risks-slowing-climate-progress/>.

⁴⁴⁹ *See* IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁵⁰ *See* Interviewee 34 on 11/6/2024, pg. 11; *see also* Interviewee 28 on 10/28/2024, pg. 8; *see also* Interviewee 42 on 11/15/2024, pg. 8.

⁴⁵¹ *Sustainable Groundwater Management Act (2019)*, CAL. DEPT. OF WATER RES., https://www.waterboards.ca.gov/water_issues/programs/gmp/docs/sgma/sgma_20190101.pdf.

⁴⁵² Interviewee 33 on 11/4/2024, pg. 9.

⁴⁵³ Isa Badia Bellinger, *California Farmers are Hoarding the State’s Water Resources*, THE FLAW (April 22, 2023), <https://theflaw.org/articles/california-farmers-are-hoarding-the-states-water-resources/>; *see also* Ava Norgrove, *Landowners Approve Funding Tuscan Water District*, NORTH STATE PUBLIC RADIO (Jan. 15, 2025), <https://www.mynspr.org/news/2025-01-15/landowners-approve-funding-tuscan-water-district>.

Groundwater Sustainability Plans (GSPs) created by GSAs, groundwater is regulated by laws such as SB 122 (2023), which requires the amount of water flowing into the Sacramento-San Joaquin Delta to be greater than the amount needed to meet certain requirements before upstream water can be diverted for groundwater replenishment.⁴⁵⁴ Interviewees⁴⁵⁵ noted that the Delta in excess rule does not allow recharge in areas that flood before the Delta does, preventing jurisdictions from utilizing flood waters for recharge.⁴⁵⁶ Other laws that are not directly related to groundwater can have major impacts on groundwater management. For example, Proposition 218 requires voter approval for taxes and most charges on property owners and applies to “local initiatives, water standby charges, legal standards of proof, election procedures, and the calculation and use of sewer assessment revenues.”⁴⁵⁷ Prop. 218 prevents GSAs from collecting fees that would be used for groundwater recharge, domestic well mitigation, land repurposing, and other groundwater sustainability projects approved in GSPs.

In order to improve groundwater planning and access, SGMA, SB 122, and Proposition 218 should be revisited. Specifically, policymakers might consider the following reforms proposed by stakeholders⁴⁵⁸ with insights into California groundwater management:

- Under SGMA, allow only one agency per subbasin (and thus one GSP per subbasin) to streamline sustainable groundwater planning.
- Under SGMA or local approval processes that occur via the Local Agency Formation Commission (LAFCO), adopt stricter standards and oversight to prevent pro forma creation of water districts by self-interested parties.
- Amendment of SB 122 to remove the requirement that the Delta be in excess before recharge is permitted for areas that flood before the Delta reaches excess conditions.
- Inclusion in Prop. 218 of exceptions for GSP-approved projects to ensure that groundwater sustainability efforts receive necessary funding.

These recommendations would require a major overhaul of SGMA and other water-related laws that would likely receive pushback from the agricultural industry and require extensive restructuring of water planning agencies. Political will and staff capacity suggest that these are mid-range policy solutions.

Update CEQA rules to address overlapping, conflicted, and uncoordinated planning priorities.

In response to the critiques detailed in “Climate plan development is limited in effectiveness due to overlapping, conflicting, and uncoordinated authority,” above, many interviewees discussed CEQA reform as crucial to improve local climate action planning, including the need for a streamlined

⁴⁵⁴ Ellen Hanak et al., *Understanding Water Available for Recharge in the Central Valley*, PUBLIC POLICY INST. OF CALIF. (Dec. 5, 2024), <https://www.ppic.org/blog/understanding-water-available-for-recharge-in-the-central-valley/>.

⁴⁵⁵ Interviewee 33 on 11/4/2024, pg. 8.

⁴⁵⁶ *Id.*

⁴⁵⁷ *Understanding Proposition 218*, LEGISLATIVE ANALYST’S OFFICE, https://lao.ca.gov/1996/120196_prop_218/understanding_prop218_1296.html.

⁴⁵⁸ Interviewee 33 on 11/4/2024, pg. 12; *see also* Interviewee 34 on 11/6/2024, pg. 11.

process of environmental review for innovative housing and environmental projects.⁴⁵⁹ A more coherent approach to CEQA reform would likely proceed through the legislative process rather than via specific carve-out exemptions as occurred through budget bills such as AB 130 and SB 131. Workshop attendees also noted CEQA litigation over CAPs as an important disincentive for CAP formation.⁴⁶⁰ Based on feedback from interviewees, workshop participants, and the literature, CEQA reform could explore:

- Centralized review of CEQA violations to promote “a consistent approach,” further oversight on the accuracy of CEQA assessment calculations, and set time limits for decision making.⁴⁶¹
- Stricter standing requirements that change CEQA’s broad standard for parties “beneficially interested” to NEPA’s stricter standard of showing that harms “from the alleged violation fall within NEPA’s ‘zone of interests.’”⁴⁶² This could re-center CEQA as a tool for environmental protection rather than NIMBY-focused litigation.⁴⁶³
- Interviewees noted that some jurisdictions are not equally interested in fast-tracking development; current CEQA incentives for CAP formation are not influential there. CEQA rules could include diverse incentives to engage in climate action planning beyond fast-tracking development, such as increased grant eligibility and access to programs and resources.
- Projects might be incentivized to exceed state and local climate change and environmental justice laws, requirements, and policy goals. For example, CARB-endorsed projects included in their Scoping Plan or projects developed under SB 1000-compliant Environmental Justice Elements of General Plans could be subject to more forgiving review standards.
- CEQA rules should include sufficient protections for Disadvantaged Communities (DACs), Designated Disadvantaged Communities (DDCs), and Disadvantaged Unincorporated Communities (DUCs), which often suffer from higher cumulative pollution burdens. In the case of DUCs, these communities lack local government bodies to advocate for their interests. CEQA rules could state that projects brought under CEQA review in DACs, DDCs, and DUCs face a heightened level of scrutiny.

Historically, CEQA reform has proven difficult. The above recommendations from interviewees and workshop participants would likely face similar backlash from building and development industries as well as lawmakers.⁴⁶⁴ Additionally, a CEQA central oversight body would require increased staff capacity and state resources.

⁴⁵⁹ Interviewee 11 on 9/26/2024, pg. 7; *see also* Interviewee 21 on 10/16/2024, pg. 10; *see also* Interviewee 33 on 11/4/2024, pg. 9; *see also* Interviewee 16 on 10/3/2024, pg. 22-23; *see also* Interviewee 6 on 9/11/2024, pg. 11.

⁴⁶⁰ *See* IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁶¹ *See* John Nelson & Daniel Rockholt, *California’s 2025 CEQA Reforms: Impacts and Ambiguities with New Housing and More*, PROCOPIO (August 7, 2025), <https://www.procopio.com/resource/ceqa-reform-impact>.

⁴⁶² *Id.* at 14.

⁴⁶³ Sara Cody, *Using State Policy to Neutralize Green Infrastructure Project-Ending Litigation and Strategically Advance Community Engagement*, 42 PACE ENV’T L. REV. 386, 397 (2025).

⁴⁶⁴ *See* *The CEQA Conundrum: Navigating Reform and Progress in California*, CAPSTONE, <https://www.capstonegov.com/post/the-ceqa-conundrum-navigating-reform-and-progress-in-california>.

Encourage flexibility in climate action planning to combat one-size-fits-all approaches and standards.

As discussed in “State requirements poorly tailored to regions, rural jurisdictions, DDCs/DUCs, and local land use,” above, a frequent insight from interviewees was that climate solutions impose one-size-fits-all approaches upon a diverse range of jurisdictions.⁴⁶⁵ State climate policy would benefit by accounting for such differences, led by agency-specific guidance. For example, CARB, via Scoping Plan updates, could include alternative climate solutions to reduce GHG emissions, meet decarbonization goals, and improve renewable energy for jurisdictions that face challenges implementing their standard VMT reduction, transportation electrification, and building decarbonization recommendations. This could account for major differences that affect climate policy, including classification of the jurisdiction (e.g., rural or urban), geography (e.g., inland versus coastal), age of housing stock and other building categories, population size, and jurisdictional resources (including staff, technical expertise, and financial resources). While standards are sometimes at odds with the need for flexibility across jurisdictions, minimum standards are essential. Therefore, it would also be important to differentiate between clear state mandates versus where there is room for flexibility in approaches to account for jurisdictional differences. Guidance documents could note the minimum legal standard and then provide several pathways for meeting this standard where possible. For example, guidance could identify AB 32’s GHG target adjusted for local governments and provide different measures which could help jurisdictions achieve these targets, with options developed according to jurisdictional type, size, geography, and infrastructure and housing stock. Agency guidance would likely require external funded research and scenario development to account for jurisdictional differences.

Streamline climate-related planning documents and timelines to address overlapping and poorly coordinated planning processes.

Time and again, throughout our research, interviews, and stakeholder engagement, communities and planning departments recounted being overburdened by the sheer proliferation of planning cycles with multiple, sometimes overlapping timelines and processes.⁴⁶⁶ Each process involves costly and time-consuming stages, including community outreach, drafting, public comment, adoption, and amendment, which often yield policies and goals related to other planning documents developed in separate, siloed processes. Planning timelines could be streamlined to reduce the burden on local governments, community partners, and the public, each of whom should be better able to reference and coordinate related documents. Laws that create new planning requirements for local governments can sync mandates with already-in-place planning timelines. For example, SB 1000 is triggered once two or more General Plan elements are amended simultaneously. This model can be replicated in future legislation that governs new planning requirements to prevent a proliferation of processes. Clear guidance should also be created informing local governments of planning mandates and deadlines to assist in plan coordination. Aligning planning cycles, updating agency staff and the public on current timelines and requirements, and including exemptions or reimbursement for

⁴⁶⁵ Interviewee 22 on 10/17/2024, pg. 24; *see also* Interviewee 21 on 10/16/2021, pg. 10; *see also* Interviewee 17 on 10/4/2024, pg. 10; *see also* Interviewee 32 on 11/4/2024, pg. 9; *see also* Interviewee 11 on 9/26/2024, pg. 6; *see also* Interviewee 19 on 10/4/2024, pg. 8; *see also* Interviewee 8 on 9/24/2024, pg. 5; *see also* Interviewee 25 on 10/22/2024, pg. 13.

⁴⁶⁶ Interviewee 44 on 11/20/2024, pg. 12; *see also* Interviewee 45 on 11/25/2024, pg. 9; *see also* Interviewee 13 on 9/30/2024, pg. 8; *see also* Interviewee 27 on 10/28/2024, pg. 12; *see also* Interviewee 19 on 10/8/2024, pg. 8.

unexpected costs for jurisdictions with recently updated documents would help ease the burden on local planning department and other staff.

Reform local option sales taxes to support green projects and overcome overlapping and poorly coordinated climate action planning.

Local planning and other staff often avoid regional coordination in order to circumvent introducing or making tragic choices among development, municipal finance, and climate action goals.⁴⁶⁷ In order to fix this problem, MPOs could be granted increased authority to “review and set conditions for local option sales tax projects that are likely to increase GHG emissions.”⁴⁶⁸ While this may improve LOST alignment with SB 375, it may further degrade relations among regional and local authorities. Instead, we recommend that the state legislature: 1) create a standardized formula for tax sharing agreements, and 2) place incentives on LOST that provide additional funding or resources for local governments should they approve climate-friendly development projects that align with SB 375 goals.⁴⁶⁹ This incentive funding or assistance could be distributed by regional MPOs to improve regional-local coordination on transportation projects that align with California’s climate change objectives, including those set under SB 375. Interviewees noted that “the biggest thing that the state should do [...] for city survival and development” is “hav[e] an across-the-board formula for how tax sharing agreements are set up.”⁴⁷⁰ Standardizing tax sharing agreements would likely face backlash from larger jurisdictions that possess more bargaining power under the current tax regime. Encouraging climate-friendly development projects could lead to a concentration of development projects in affluent jurisdictions, as these jurisdictions are in a position to take advantage of incentives. To prevent this, incentives should be designed with the financial barriers faced by smaller, disadvantaged jurisdictions in mind.

Create standardized GHG inventories for local governments as well as expanded guidance on measuring and reporting co-benefits to improve CAP support and participation.

Interviewees explained that it is difficult to assess state-level targets as local jurisdictions struggle to find accurate, consistent data, templates, or metrics to complete their GHG emission inventories.⁴⁷¹ Faulty, varying data can skew the type and intensity of climate measures considered. Chief among the data challenges expressed were utility-specific data, which they are not obliged to provide despite their essential role in inventorying GHGs.⁴⁷² To address these challenges, the state could:

- Require utilities and other bodies to provide data to local governments that are necessary to inventory GHG emissions. This would save local governments time and resources in the data gathering process for CAP creation.

⁴⁶⁷ Interviewee 11 on 9/26/2024, pg. 10, 12; *see also* Interviewee 8 on 9/24/2024, pg. 8.

⁴⁶⁸ Tamika L. Butler et al., *Aligning Metropolitan Transportation Planning and Investments with California’s Climate and Equity Goals: An Assessment*, UCLA INST. OF TRANSP. STUDIES (Oct. 2024), <https://ww2.arb.ca.gov/sites/default/files/2024-11/III.3%20-%20Planned%20Transportation%20Investments%20-%20UCLA.pdf>.

⁴⁶⁹ Interviewee 23 on 10/18/2024, pg. 7.

⁴⁷⁰ Interviewee 11 on 9/26/2024, pg. 10.

⁴⁷¹ Interviewee 31 on 10/30/2024, pg. 16; *see also* Interviewee 32 on 11/4/2024, pg. 13.; *see also* Interviewee 25 on 10/22/2024, pg. 10; *see also* Interviewee 13 on 9/30/2024, pg. 2; *see also* Interviewee 36 on 11/7/2024, pg. 14.

⁴⁷² *See* Interviewee 36 on 11/7/2024, pg. 15; *see also* Interviewee 31 on 10/30/2024, pg. 16.

- Encourage standardization among GHG inventories, including calculation methods, GHGs covered, and sectors analyzed. GHG inventories are foundational to CAPs. Standardizing GHG inventories would improve uniformity, comparability, and accuracy of GHG measurements across the state.
- To support local climate action and eliminate duplication, provide standardized GHG inventories at the state level, or, alternatively, allocate standardized GHG inventory creation to the regional level along with sufficient resources to do so.⁴⁷³ This would save local governments time and resources, as well as improve the likelihood of standardization. However, it is important to note that the state will likely face a lack of consensus among jurisdictions regarding sectors, emissions, and methods of calculation that should be included.

In addition to standardized GHG inventories, co-benefits data can improve the connection between climate action planning and community support and participation. Interviewees stressed the importance of understanding co-benefits.⁴⁷⁴ Workshop participants likewise emphasized the power of co-benefits to further climate action, especially in jurisdictions that are otherwise ambivalent or opposed to climate policies.⁴⁷⁵

Given the emphasis on the importance of co-benefits, policymakers should consider expanding available guidance, as well as creating standardized co-benefits tools to increase the ability of local governments to compare the performance of policy mixtures locally and regionally. CARB provides descriptions for 12 co-benefits, 10 of which include assessment methodologies. Comparatively, the County of San Diego's Co-Benefits Evaluation Tool (2024) covers 18 co-benefits, all of which are specifically related to climate action policies.⁴⁷⁶ Expanded guidance could include additional co-benefits, each with their own assessment methodologies. Local governments could be surveyed to evaluate which co-benefits are most important to communities and thus should be prioritized in the guidance. Local planning staff would also likely benefit if the state offered training on the use of assessment methodologies and how best to report them to the public. Interviewees noted that creative messaging around co-benefits can increase community support and participation in climate action. These additional resources would assist local jurisdictions in identifying, monitoring, and reporting on co-benefits and ensure that local governments are able to include co-benefits as a planning tool for local climate action. State-level staff and capacity limits to designing robust guidance and training, as well as knowledge limits such as developing consistent, statewide data sources accessible to local governments for co-benefit calculation, would need to be overcome through creative partnerships between state agencies and university and other researchers.

⁴⁷³ See IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁷⁴ Interviewee 23 on 10/18/2024, pg. 9-10; *see also* Interviewee 36 on 11/7/2024, pg. 6; *see also* Interviewee 41 on 11/13/2024, pg. 11; *see also* Interviewee 16 on 10/3/2024, pg. 20; *see also* Interviewee 23 on 10/18/2024, pg. 12; *see also* Interviewee 41 on 11/13/2024, pg. 4.

⁴⁷⁵ See IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁷⁶ *Appendix 2: Co-Benefits Evaluation Tool, County of San Diego Climate Action Plan*, COUNTY OF SAN DIEGO, https://www.sandiegocounty.gov/content/dam/sdc/sustainability/docs/final2024cap/Final2024CAP_A-2_Co-Benefits-Evaluation-Tool.pdf.

Provide technical guidance on ground truthing as well as creation and maintenance of data portals to ensure that data accurately reflect community experience.

Many interviewees mentioned the utility of ground truthing for confirming data and revealing community needs.⁴⁷⁷ Despite the importance of ground truthing, there are no state resources or guidance for local governments to ground truth data that are used in climate action planning. For example, CARB released a Community Engagement Model in 2024.⁴⁷⁸ While this document defines ground truthing, it does not provide guidance as to when or how a local government should carry it out.⁴⁷⁹ Guidance should be developed by regional governments on how and when local governments should ground truth data, so that the guidance can be tailored to region-specific challenges and circumstances. Where appropriate, regional governments can undertake ground truthing for larger datasets. In addition to guidance, resources could be made available to assist local governments in performing outreach as ground truthing efforts are carried out. Funding and technical guidance could also be developed to assist local governments in creating and maintaining data portals and dashboards. Currently, regional governments attempt to fill this gap. For example, the San Diego Association of Governments (“SANDAG”) provides open-access GIS datasets on land use, transportation, and demographic trends as well as crime data and socioeconomic datasets through the Open Data Portal on the SANDAG website.⁴⁸⁰ The Los Angeles Regional Collaborative for Climate Action and Sustainability has climate-specific data resources, including a GHG inventory for Los Angeles County as well as meetings to encourage peer-to-peer knowledge transfer among climate planners and practitioners.⁴⁸¹ These tools benefit local planning efforts and community-government relations. They could also be used to encourage co-development of public data to ensure that they accurately reflect community experience. Regional bodies should be provided state-level funding to continue these databases, as well as for training local governments on their own data-gathering practices.

Increase agency staff, raise fines, train employers, and provide public know-your-rights education to improve enforcement of indoor and outdoor extreme heat occupational regulations.

Extreme heat was the most prevalent climate hazard discussed by interviewees and workshop participants.⁴⁸² Underenforcement of rules to protect indoor and outdoor workers from heat-related

⁴⁷⁷ Interviewee 41 on 11/13/2024, pg. 9-10; *see also* Interviewee 37 on 11/11/2024, pg. 7; *see also* Interviewee 14 on 10/1/2024, pg. 9; *see also* Interviewee 38 on 11/11/2024, pg. 13.

⁴⁷⁸ *Community Engagement Model*, CAL. AIR RES. BD., https://ww2.arb.ca.gov/sites/default/files/2025-01/CARB_Community_Engagement_Model_December2024.pdf; *see also* Environmental Justice Program, CALEPA, <https://calepa.ca.gov/envjustice/>.

⁴⁷⁹ *Id.* at 215-16.

⁴⁸⁰ *Open Data Portal*, SAN DIEGO ASS’N OF GOV’TS (2025), <https://www.sandag.org/data-and-research/open-data-portal>.

⁴⁸¹ *About LARC*, LA REGIONAL COLLABORATIVE (2025), <https://www.laregionalcollaborative.com/about>.

⁴⁸² *See* Interviewee 31 on 10/30/2024; *see also* Interviewee 11 on 9/26/2024; *see also* Interviewee 43 on 11/15/2024; *see also* Interviewee 39 on 11/12/2024; *see also* Interviewee 18 on 10/7/2024; *see also* Interviewee 28 on 10/28/2024; *see also* Interviewee 24 on 10/21/2024; *see also* Interviewee 30 on 10/29/2024; *see also* Interviewee 25 on 10/22/2024; *see also* Interviewee 14 on 10/1/2024; *see also* Interviewee 2 on 9/6/2024; *see also* Interviewee 16 on 10/3/2024; *see also* Interviewee 15 on 10/3/2024; *see also* Interviewee 23, on 10/18/2024; *see also* Interviewee 22 on 10/17/2024; *see also* Interviewee 21 on 10/16/2024.

illness was a common concern.⁴⁸³ Ensuring that workers are protected from heat-related illness was described as an area in dire need of state attention, through reduced staff vacancies, modernized data management systems, conducting on-site inspections when state law requires, ensuring fines and penalties are assessed and sufficient to discourage non-compliance, and closing complaints after the state verifies that employers fixed their safety hazards. Local governments can develop and distribute know-your-rights materials that focus on local climate hazards, employer obligations under Injury and Illness Prevention Plans to correct job hazards and keep workers safe during investigations, and worker rights to report, access training and medical care, and protection from discrimination and retaliation. Local climate action can be leveraged as well. For example, as Housing Elements include policies and measures to ensure compliance with fair housing laws, CAPs can incorporate policies to support compliance with heat-related illness standards. These policies can include the creation of know-your-rights materials discussed above, as well as measures to ensure that employers are aware of heat-related regulations, how to properly follow them in the workplace, and penalties for failing to do so. Cal-OSHA already struggles under more than 12,000 complaints per year while employees fail to register countless more due to fear, intimidation, and retaliation. Additional funding and staff capacity, know-your-rights training and public awareness of rights, and enforcement of occupational health and safety and civil rights laws are likely necessary to ensure that workers are protected as climate hazards raise new health and safety threats to workers in construction, manufacturing, and agriculture.

Encourage collaboration with public schools to reach linguistically isolated communities.

Interviewees described public schools as an under-utilized resource to improve climate action by including school activities in CAP measures, ensuring students have core competencies, and improving outreach to linguistically isolated communities.⁴⁸⁴ Schools can serve as a crucial source of training as well as a link between local governments and linguistically isolated communities. State agencies should recognize the importance and utility of connecting local governments with their schools and support these efforts through toolkits and funding. The Institute for Local Government’s “Government’s Engaging Youth Toolkit,” for example, supports partnerships between schools and local governments.⁴⁸⁵ It includes a readiness assessment to consider “preliminary details for starting a youth-civic engagement program,” template agreements for partnerships between governments and schools, resources for supportive infrastructure, program content development tools, and sample models of partnerships in other jurisdictions.⁴⁸⁶ Government-school collaboratives to advance CAP goals might first address public schools as a source of VMT and ensure that schools participate in VMT reduction.⁴⁸⁷ An updated toolkit could also provide guidance on establishing Youth Councils to build trust and meaningfully engage

⁴⁸³ See Suhauna Hussain, *As Southland Heat Wave Hits, Fast-Food Union Says Safety Rules Aren’t Being Followed*, LOS ANGELES TIMES (Aug. 20, 2025), <https://www.latimes.com/business/story/2025-08-20/as-southern-california-heat-wave-approaches-fast-food-union-says-lack-safety-measures>.

⁴⁸⁴ Interviewee 2 on 9/6/2024, pg. 3; *see also* Interviewee 3 on 9/6/2024, pg. 5; *see also* Interviewee 17 on 10/4/2024, pg. 12.

⁴⁸⁵ *Governments Engaging Youth Toolkit*, INST. FOR LOCAL GOV., <https://www.ca-ilg.org/governments-engaging-youth-toolkit>.

⁴⁸⁶ *Id.*

⁴⁸⁷ *See* IECA Workshop Transcript Notes, *supra* n. 417.

students in local government actions.⁴⁸⁸ The state could provide incentives and funding to establish these collaboratives, use public spaces for information-sharing, and enact local projects. School district willingness to participate in climate-related collaborative programs remains a stark limitation to getting such work off the ground. The state should consider creating programs that connect students interested in climate change work and aspiring community leaders with local governments for internships and other experiential opportunities. Existing models for connecting schools with local resources can be replicated. For example, the California Community School Partnership Program “supports schools’ efforts to partner with community agencies and local government to align community resources to improve student outcomes.”⁴⁸⁹ Programs like the California Climate Action Corps places fellows with public agencies and other organizations.⁴⁹⁰ These programs can serve as frameworks for partnerships between schools and local governments.

Create tools that promote transparent internal CAP implementation and monitoring to assist local jurisdictions in CAP enactment and disclosure.

Interviewees and workshop participants highlighted the importance of best practices for CAP implementation.⁴⁹¹ Quality implementation plans and internal CAPs provide roadmaps for local governments on timelines for implementation, allocation of responsibilities, opportunities for accountability, procedures for monitoring progress, and tools to collect and share data.⁴⁹² However, development of implementation plans and internal CAPs imposes funding, staff, and technical burdens as well as disclosure challenges for local governments.⁴⁹³ State agencies could create templates for detailed CAP implementation plans to be released publicly, with a focus on best practices as well as how templates can be adapted to fit local conditions and existing climate policy mixtures. Some jurisdictions have detailed CAP Implementation Plans that include timelines, allocation of responsibilities, and an Implementation Cost Analysis report to account for known costs and staffing needs for the first 5 years of CAP implementation.⁴⁹⁴ Templates could also include a compilation of available monitoring tools and data portals at the state and regional level that local governments can access. Templates could be adapted and shared by regional bodies to better serve their specific jurisdictions. This resource would ease the burden of implementation, particularly for under-resourced jurisdictions that are unable to develop their own implementation plans. CAP enactment can be further encouraged by providing benefits to jurisdictions that use and follow implementation plans, such as increased funding opportunities for CAP-related projects.

⁴⁸⁸ Pooja Bachani Di Giovanna & Alexander DeSantis, *Youth Councils Can Strengthen Local Government and Build Trust*, INT’L CITY/COUNTY MGMT. ASSOC. (Dec. 1, 2022), <https://icma.org/articles/pm-magazine/youth-councils-can-strengthen-local-government-and-build-trust>.

⁴⁸⁹ *California Community Schools Partnership Program*, CALIFORNIA DEPARTMENT OF EDUCATION, <https://www.cde.ca.gov/ci/gs/hs/ccspp.asp>.

⁴⁹⁰ See *California Climate Action Corps*, CALIF. CLIMATE ACTION CORPS, <https://www.climateactioncorps.org/>.

⁴⁹¹ See Interviewee 39 on 11/12/2024; see also Interviewee 13 on 9/30/2024, pg. 11; see also Interviewee 44 on 11/20/2024, pg. 8; see also Interviewee 45 11/25/2024, pg. 6.

⁴⁹² See Harris, *supra* n. 216.

⁴⁹³ See Interviewee 8 on 9/24/2024, pg. 8-9; see also Interviewee 39 on 11/12/2024, pg. 3-4; see also Interviewee 45 on 11/25/2024, pg. 5.

⁴⁹⁴ See e.g., *Sustainability and Mobility: Climate Action Plan*, CITY OF SAN DIEGO, <https://www.sandiego.gov/sustainability-mobility/climate-action/cap>.

Ensure that funding is easy to access and maintain, attuned to post-approval CAP implementation challenges, and equity centered.

Workshop participants called for steady funding streams to be made readily available to local jurisdictions for CAP implementation.⁴⁹⁵ They described funding for CAP development as sparse, competitive to obtain, and difficult to maintain once acquired.⁴⁹⁶ New funding should be structured and allocated to further the goals of accessibility, equity, a focus on CAP implementation, and clear, attainable reporting requirements. Funding that is easy to access and maintain would have streamlined application and reporting processes. One example mentioned by interviewees is the Buildings Upgrade Prize, a federally funded prize that supports building resiliency and efficiency upgrades.⁴⁹⁷ This funding source was praised for its flexible structure, low-maintenance reporting scheme, and upfront funds.⁴⁹⁸ Funding can be more equity-centered by creating eligibility requirements that center the needs of disadvantaged communities. Equity-centered funding that targets disadvantaged communities is already available through, for example, SB 1275, which “directs [CARB] to establish equity programs such as EV car-sharing programs in disadvantaged communities,”⁴⁹⁹ SB 535, which requires “at least 25% of [the Greenhouse Gas Reduction Funds] go to projects that benefit disadvantaged communities, with at least 10% going to projects located within these communities,”⁵⁰⁰ and AB 1550, which requires CARB’s investment plan for the Greenhouse Gas Reduction Fund to allocate a minimum of 25% of the available funds in projects that benefit disadvantaged communities, with additional mandates for low-income communities or households.⁵⁰¹ Equity-centered funding for climate action can mimic these targeting approaches. Workshop participants also noted that creative uses of funding to encourage climate action should take precedence over funding that merely creates additional mandates or requirements.⁵⁰² Many funding sources focus on financial support for the creation of a CAP document. New funding could instead focus on CAP implementation by offering grants and other financial resources to jurisdictions that have already created a CAP for the specific purpose of enacting measures and projects outlined in the CAP. This will improve local governments’ ability to create planning documents that do not merely “sit on the shelf” once adopted but rather create meaningful change in their communities and meet state-level climate goals.

⁴⁹⁵ See IECA Workshop Transcript Notes, *supra* n. 417.

⁴⁹⁶ See Interviewee 31 on 10/30/2024; see also Interviewee 40 on 11/13/2024, pg. 12; see also Interviewee 36 on 11/7/2024, pg. 10; see also Interviewee 23 on 10/18/2024, pg. 5-6; see also Interviewee 32 on 11/4/2024, pg. 4; see also Interviewee 21 on 10/16/2024, pg. 6.

⁴⁹⁷ *Buildings Upgrade Prize*, U.S. DEP’T OF ENERGY, <https://www.energy.gov/eere/buildings/buildings-upgrade-prize-buildings>.

⁴⁹⁸ Interviewee 39, on 11/12/2024.

⁴⁹⁹ *Charge Ahead California: One Million Electric Cars, Trucks, and Buses*, CHARGE AHEAD, <https://greenlining.org/wp-content/uploads/2015/08/Charge-Ahead-California-V9.pdf>.

⁵⁰⁰ *SB 535 Fact Sheet*, GREENLINING INST., <https://greenlining.org/wp-content/uploads/2014/12/SB535-Fact-Sheet-Final.pdf>.

⁵⁰¹ Cal. Health & Safety Code § 39713.

⁵⁰² See IECA Workshop Transcript Notes, *supra* n. 417.

Scale up training for planners and workers in green technology fields to ensure high-quality CAP and Environmental Justice Element strategies and actions can be implemented.

Many local jurisdictions require additional workforce development in order to create and implement CAP and Environmental Justice Element strategies and actions.⁵⁰³ Their workforce development needs include planning staff and professionals trained to work on advanced climate technologies, including EV charging station maintenance and installation, solar energy, and electrification.⁵⁰⁴ Workshop participants also explained the importance of training planners on how to successfully implement environmental justice provisions in General Plans.⁵⁰⁵ Professional training could focus on installing, maintaining, and repairing EV charging stations and solar panels, retrofitting buildings, and other green technology-related skills. These professional trainings should also offer programs and courses to existing local government planners, specifically on climate action and environmental justice planning. They could build on existing efforts, such as the California Energy Commission's (CEC) Workforce Training and Development programs⁵⁰⁶ and the California Climate Action Corps.⁵⁰⁷ CEC's Workforce Training and Development programs focus on supporting workers in zero-emission vehicle and other infrastructure sectors.⁵⁰⁸ The California Climate Action Corps places trained workers in public agencies, educational institutions, and non-profit and Tribal organizations.⁵⁰⁹ The most equitable and effective training program would likely focus specifically on training and staffing for DACs, DDCs, and DUCs. Workforce development programs are resource-intensive and have been found to yield mixed results.⁵¹⁰ Yet they are viewed by interviewees and workshop participants as essential to properly meet even current climate action goals.

Support climate collaboratives to monitor CAP implementation, support workforce development, and overcome interlocal and regional coordination challenges.

Regional climate collaboratives are crucial for enacting climate action across California. Working with regional bodies on climate action planning provides many benefits such as improved data sharing, technology support, policy alignment, and expanded access to funding. The state should institute incentives for the creation of intra-city as well as local-regional climate collaboratives. State incentives for collaboration could include funding for the formation and governance of regional climate collaboratives. Sustainability departments, planning departments, and Climate Action Coordinators can be tapped from local and regional jurisdictions to participate. Regional bodies such as COGs and MPOs that are familiar with their local jurisdictions may be well-positioned to distribute funds, convene and facilitate dialogue among regional and local governments. These incentives can be modeled on existing programs, such as the Strategic Growth Council's Regional Climate Collaboratives Program, which "seeks to strengthen local coordination, leadership, knowledge, and skills with a focus on increasing access to funding resources for project planning

⁵⁰³ See Interviewee 11 on 9/26/2024, pg. 4; see also Interviewee 21 on 10/16/2024, pg. 13; see also Interviewee 23 on 10/18/2024, pg. 12.

⁵⁰⁴ Interviewee 21 on 10/16/2024, pg. 13.

⁵⁰⁵ See IECA Workshop Transcript Notes, *supra* n. 417.

⁵⁰⁶ See *Workforce Training and Development*, CALIF. ENERGY COMM'N, <https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program/clean-transportation-funding-areas-2>.

⁵⁰⁷ See *California Climate Action Corps*, CALIF. CLIMATE ACTION CORPS, <https://www.caclimateactioncorps.org/>.

⁵⁰⁸ See *Workforce Training and Development*, *supra* n. 506.

⁵⁰⁹ See *Overview*, CALIF. CLIMATE ACTION CORPS, <https://www.caclimateactioncorps.org/overview>.

⁵¹⁰ See Adam Echelman, *Thousands of Californians Got a Shot at Better Careers Through This Program. Is It Working?*, CALMATTERS (Feb. 14, 2024), <https://calmatters.org/education/higher-education/2024/02/workforce-training/>.

and implementation.”⁵¹¹ However, while this specific grant program funds three years of capacity-building focused on climate project implementation, state-created climate collaboratives programs should instead focus on connecting local and regional governments for information-sharing and provide direct lines of communication from the local and regional level to state government. Supporting these collaboratives will ensure innovations at the local level can be shared across jurisdictions and provide crucial feedback to the state on how climate policies are progressing on the ground in local communities, and how they could be improved.

Promote use of best practices for “meaningful involvement” as well as community engagement in later CAP development and implementation stages.

We found that many jurisdictions, constrained by funding, staff, public availability, and capacity, were unable to engage in “meaningful involvement” during the climate action planning process.⁵¹² Workshop participants discussed community engagement multiple times, explaining that planning departments do not have the bandwidth to ensure meaningful involvement, as opposed to participation, across multiple planning processes.⁵¹³ There was agreement that best practices for fostering meaningful involvement have yet to be codified or widely employed in climate action planning. To this end, the state should create and codify best practices for “meaningful involvement” in CAP development and implementation, which might include:

- Require public participation in CAP processes, similar to the participation requirements for General Plans under Government Code Section 65351. Because CAPs are not mandatory, this requirement could be embedded in CEQA. Thus, to become a CEQA-qualified CAP and receive related benefits, jurisdictions would have to conduct public outreach and involvement during CAP creation.
- Facilitate use of Community Benefit Agreements (CBAs). CBAs are “legally binding, enforceable contract[s] signed by project developers and community group[s]” that are negotiated between community representatives and project developers as well as between local governments and community organizations.⁵¹⁴ Workshop participants considered CBAs an engagement tool that can ensure equity in local CAP implementation.⁵¹⁵ State or regional government could create template CBAs and sample CAP policies encouraging the use of CBAs for major projects. These templates can then be used by local governments.
- Adopt stronger language access requirements to ensure that languages spoken by impacted parties, including transnational indigenous languages,⁵¹⁶ are included throughout the lifecycle of climate action planning, from pre-translation of terms to communicating proposed and adopted

⁵¹¹ *Regional Climate Collaboratives Program*, CALIFORNIA GRANTS PORTAL, <https://www.grants.ca.gov/grants/regional-climate-collaboratives-program/>.

⁵¹² See Interviewee 19 on 10/8/2024, pg. 1; see also Interviewee 11 on 9/26/2024, pg. 4; see also Interviewee 36 on 11/7/2024, pg. 4; see also Interviewee 3 on 9/6/2024, pg. 4.

⁵¹³ See IECA Workshop Transcript Notes, *supra* n. 417.

⁵¹⁴ Louise Bedsworth et al., *Community Benefits Tools and California Clean Energy Projects: Strategies for Policy Design*, BERKELEY CNTR. FOR LAW, ENERGY, & THE ENV'T (Oct. 2024), https://www.law.berkeley.edu/wp-content/uploads/2024/10/Community-Benefits-Tools-and-California-Clean-Energy-Projects_CLEE-Report_Oct24.pdf, at 26.

⁵¹⁵ See IECA Workshop Transcript Notes, *supra* n. 417.

⁵¹⁶ See *id.*

climate actions to the public.⁵¹⁷ These requirements can be embedded in the Bilingual Services Act, which requires local governments to provide language access services if they serve a “substantial number of non-English-speaking people.”⁵¹⁸ However, the Act currently leaves this determination, as well as determinations on how and when materials should be translated, to the discretion of local governments.⁵¹⁹ Amending the Bilingual Services Act with stricter requirements on when and how local governments should translate plans would improve language access to these important documents. These amendments can be included in current efforts to expand the Act’s requirements.⁵²⁰

Require statewide standards but allow tailoring of climate actions to distinctive community concerns.

Through our review of planning documents throughout Southern California and the San Joaquin Valley, we found that many General Plans and CAPs use standardized, template-based policies and measures. Interviewees also noted that standardized options predominate,⁵²¹ and tailoring policies to local conditions is difficult due to cost and capacity limitations.⁵²² While maintaining minimum state standards for development and implementation of CAPs is essential, SB 1000 and future laws related to General Plan and CAP development must not only allow but encourage local governments to tailor CAPs to their distinctive needs and contexts in a number of ways. The following measures would support local governments’ ability to develop solutions tailored to community concerns:

- CEQA Guidelines, including Section 15183.5(b) lay out the requirements for a CEQA-qualified CAP; they could be amended to require specification of how CAP strategies address local effects and needs, particularly those of DACs, DDCs, and DUCs.⁵²³ This will ensure solutions are attuned to the specific issues these communities face. New CEQA guidelines could be modeled on SB 244, which requires the identification of infrastructure and community issues in DUCs in General Plans.
- Community-generated data can help fill an important gap in tailoring climate actions by addressing shortcomings in localized, publicly collected data.⁵²⁴ Enabling increased use of community-generated data would support policies that more closely align with local issues. To increase and improve the use of community-generated data, state CAP procedures could be updated to ensure that community-generated data are adequately received, stored, accessed, used to explore patterns, trends, and linkages, and subject to data quality objectives and indicators for data systems as well as data points. The state could also provide guidance on best practices for

⁵¹⁷ Daisy Simmons, *Connecting Latino Communities to Local Climate Action*, YALE CLIMATE CONNECTIONS (Jan. 1, 2019), <https://yaleclimateconnections.org/2019/01/connecting-latino-communities-to-climate-action/>.

⁵¹⁸ *Language Access Laws and Legal Issues: A Local Official’s Guide*, INSTITUTE FOR LOCAL GOVERNMENT, https://ca-ilg.org/sites/main/files/file-attachments/language_access_guide_formatted_9-27-11_2.pdf, at 12–13.

⁵¹⁹ *See id.*

⁵²⁰ *AB 1242: Language Access*, CALMATTERS, https://calmatters.digitaldemocracy.org/bills/ca_202520260ab1242.

⁵²¹ Interviewee 44 on 11/20/2024, pg. 4.

⁵²² Mathilde Bouyé & David Waskow, *Climate Action Isn’t Reaching the Most Vulnerable—But It Could*, WORLD RES. INST. (Nov. 11, 2021), <https://www.wri.org/insights/how-climate-action-can-help-vulnerable-populations>.

⁵²³ *See Climate Action Planning*, CAL. AIR. RES. BD., <https://ww2.arb.ca.gov/our-work/programs/local-actions-climate-change/climate-action-planning>.

⁵²⁴ *Data From Community Science is Underutilized; New Study Aims to Change That*, CALIF. ACADEMY OF SCI. (June 11, 2021), <https://www.calacademy.org/press/releases/data-from-community-science-is-underutilized-new-study-aims-to-change-that>.

meaningful consideration of such data during CAP development and implementation, in conjunction with residents and community-based organizations.

- Tailoring climate actions can be furthered by helping CBOs play a crucial role in climate action planning.⁵²⁵ There are no formal state-level incentives or compensation schemes to ensure that CBOs are able to help fill government-public relations gaps in local climate action. Workshop participants noted that CBOs are overburdened and should be given additional support if they are to contribute meaningfully to climate action planning.⁵²⁶ Government Code Section 65351's requirement to “provide opportunities for the involvement of [...] other community groups”⁵²⁷ could be strengthened to include specific requirements for outreach to and involvement of CBOs in the planning, drafting, and implementation phases of local climate, hazard, environmental justice, and other plans. This would simply codify and support work that is already underway by CBOs to overcome the lack of extensive, thorough outreach by local governments during CAP development and implementation. Supporting CBOs and their continued involvement in plan development would support tailoring by ensuring organizations with deep knowledge of community-specific issues are part of the planning process.

Create equity metrics and indicators that encourage local jurisdictions to monitor and improve CAP provisions and Environmental Justice Elements in General Plans.

Workshop participants argued that the state could provide reporting metrics to support local climate planning efforts⁵²⁸ upon which local jurisdictions can add more tailored performance measures. Setting a baseline for reporting metrics would allow local governments to compare themselves to similarly situated communities and more readily identify issues of concern with CAP implementation through a mix of strategies. Despite the success of CalEnviroScreen and other statewide attempts to develop screening tools to identify disadvantaged and environmental justice communities,⁵²⁹ it remains true that climate action and environmental justice planning largely fail to reduce environmental burdens and hazards. To achieve environmental justice under state law, including “to ensure a healthy environmental for all people”⁵³⁰ through laws and policies that result in “true parity,”⁵³¹ metrics could be designed and tracked by local governments, in conjunction with regional MPOs and other organizations as well as the public, alongside co-benefit assessment guidance and technical assistance recommended above.⁵³² The state could support such work, as well as the use of labor-intensive approaches such as health impact assessment that can identify differential impact and

⁵²⁵ See Interviewee 27 on 10/28/2024, pg. 4-5; see also Interviewee 32 on 11/4/2024, pg. 5; see also Interviewee 39 on 11/12/2024, pg. 3; see also Interviewee 22 on 10/17/2024, pg. 3; see also Interviewee 30 on 10/29/2024, pg. 7; see also Interviewee 29 on 10/29/2024, pg. 10; see also Interviewee 36 on 11/7/2024, pg. 5; see also Interviewee 21 on 10/16/2024, pg. 4; see also Interviewee 23 on 10/18/2024, pg. 8-9.

⁵²⁶ See IECA Workshop Transcript Notes, *supra* n. 417.

⁵²⁷ Cal. Gov. Code § 65351 (2023).

⁵²⁸ See IECA Workshop Transcript Notes, *supra* n. 417.

⁵²⁹ See *id.*

⁵³⁰ Cal. Pub. Resources Code § 30107.3.

⁵³¹ Cal. Health & Safety Code § 116765.

⁵³² See e.g., Talin Lanckton & Subin DeVar, *Justice in 100 Metrics: Tools for Measuring Equity in 100% Renewable Energy Policy Implementation*, INITIATIVE FOR ENERGY JUSTICE (Jan. 2021), <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>.

disparities in baseline levels of health.⁵³³ These equity metrics and indicators could be modeled on existing tools, such as the Public Health Alliance’s Healthy Places Index, which “maps data on social conditions that drive health — like education, job opportunities, clean air and water, and other indicators that are positively associated with life expectancy at birth.”⁵³⁴ Metrics and indicators should be adapted to the state’s climate change and environmental justice goals and inclusive enough to cover the diverse issues facing jurisdictions across California. Guidance should be created on best practices for tracking, disseminating, and integrating these metrics and indicators into the planning process.

Conclusion

As a social, environmental, economic, and ethical problem, climate change is the greatest collective action challenge ever faced.⁵³⁵ It is “diffuse and disparate in origin,” with “lagged and latticed” effects that strain existing governance structures and commitments.⁵³⁶ It invites us to reconsider the uneasy roles and relationships that exist whenever regulatory authority is shared. And it calls for us to revisit human approaches to assess, mitigate, address, and adapt to risks and harms. Despite a burgeoning literature devoted to climate action planning, California (like all other U.S. jurisdictions) has yet to carefully and comprehensively address what such shared regulatory authority should look like across the full range of climate action problems and stages, from scoping and issue identification to monitoring, performance measurement, learning, and adjustment. This report provides the broad contours for a dialogue about such shared authority.

Our findings make clear that the work ahead to bring local climate action up to the task begins with a return to first principles of multi-level governance, which can be stated in the form of three questions: How can California best ensure baseline levels of public health and safety while encouraging strategies tailored to local impacts and needs? How can California best take advantage of the state’s particular competencies such as in standard setting, pooling of resources, and information dissemination while leveraging local government competencies in climate action planning? And how can California set up and steward policy learning and continuous improvement dynamics across levels of governance? Our findings and recommendations are presented as an initial set of propositions to ensure that California achieves effective and equitable shared governance in a changing climate. Refining such steps and agreeing to set them in motion is the work ahead to ensure that the state achieves its increasingly vital commitments to climate action on behalf of all Californians.

⁵³³ Mirko Winkler et al., *Health Impact Assessment International Best Practice Principles*, INT’L ASS’N FOR IMPACT ASSESSMENT Special Publication Series No. 5 (Apr. 2021); see also Jonathan Heller et al., *Advancing Efforts to Achieve Health Equity: Equity Metrics for Health Impact Assessment Practice*, 11 INT’L J. OF ENVTL. RES. & PUBLIC HEALTH 11054 (2014).

⁵³⁴ *Healthy Places Index*, CALIFORNIA HEALTHY PLACES INDEX, <https://www.healthyplacesindex.org/>.

⁵³⁵ Paul Bauer et al., *The Greenhouse Development Rights Framework: The Right to Development in a Climate Constrained World*, STOCKHOLM ENVTL. INSTITUTE (2008), <https://www.sei.org/publications/right-development-climate-constrained-world-greenhouse-development-rights-framework/>.

⁵³⁶ Douglas A. Kysar, *What Climate Change Can Do About Tort Law*, 41(1) ENVTL. L. 1, 3-4 (2011).

Appendix A

Table 1: Select Laws Related to Climate Change Targets

This table provides an overview of a sample of state laws that create targets related to climate change. The table includes the specific target, how the law potentially affects local climate action planning, whether the target has been translated to create local requirements or responsibilities by the state, and whether the law creates conflicts for planners.

State Law	Target	How does this target shape and reform local climate action planning?	Has this target been translated to the local level by the state?	Does this target create any conflicts for local planners?
AB 32/SB 32	<p>By 2020: reduce GHG emissions to 1990 levels [met in 2016]</p> <p>By 2030: reduce GHG emissions 40% below 1990 levels</p> <p>By 2045: reduce GHG emissions at least 85% below 1990 levels</p>	These targets guide local planners' emissions reduction goals. They are often referenced in General Plans related to air quality and climate change policies and are used to calibrate local emissions reduction targets in Climate Action Plans.	No. CARB previously recommended 15% below current levels by 2020, however, in 2022, CARB's scoping plan "does not recommend a specific GHG target or target-setting method for local governments." ⁵³⁷	This target creates conflicts for local planners attempting to balance climate-related emissions targets, VMT reductions, and fair housing requirements under AB 686.
SB 350/SB 100	Increases the renewable energy target to 50% by 2030. The target was updated in 2018 by SB 100 to mandate renewable energy targets of 33% by 2020, 50% by 2026, and 60% by 2030.	State renewable energy targets are mandatory for local publicly owned electric utilities and are referenced in General Plans and Climate Action Plans that include policies related to renewable energy.	No, however, CARB provides some guidance on Accessible Clean Transportation Options for SB 350. ⁵³⁸	Current PUC incentive structure favors energy companies and has led to cutting solar credits, conflicting with the state mandate for renewable energy.
SB 375	Requires regional transportation plans to adopt a sustainable communities strategy (SCS) that metropolitan planning organizations must be consistent with and requires the Air Resources Board to provide metropolitan planning organizations GHG emissions reduction targets for automobiles.	This law requires local agencies to set forth a schedule of planning actions, exempts from CEQA a transit priority project, and extends the time period between housing element updates from five years to eight years. The SCS often guides local climate action planning.	No. Regional targets are set by CARB, and regional agencies provide guidance through RTP and SCS documents, however, this guidance is not translated to the local level for each specific jurisdiction.	This target creates conflicts for local planners attempting to balance climate-related emissions targets, VMT reductions, fair housing requirements under AB 686, and California's Density Bonus Law.
SB 379	Requires local governments to include climate adaptation and resilience strategies in their safety elements	This law requires local governments to update their Safety Elements to address climate adaptation and resilience based on the specific risks climate change poses to that local jurisdiction.	Yes. This law was made specifically for the local level, so no additional translation is required.	No conflicts found (local law).

⁵³⁷ 2022 Scoping Plan, Appendix D: Local Actions, CAL. AIR. RES. BD. (May 2022),

<https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf>.

⁵³⁸ Accessible Clean Transportation Options, SB 350, CAL. AIR. RES. BD., <https://ww2.arb.ca.gov/our-work/programs/accessible-clean-transportation-options-sb-350>.

State Law	Target	How does this target shape and reform local climate action planning?	Has this target been translated to the local level?	Does this target create any conflicts for local planners?
SB 1000	Requires: 1) Planning agencies to revise the safety element to identify new information addressing flooding and fires and 2) Makes environmental justice a required element of General Plans to identify disadvantaged communities and objectives and policies to reduce the unique or compounded health risks in these communities.	This law creates a new required General Plan Element that addresses environmental justice. Environmental justice is closely intertwined with climate action planning.	Yes. This law was made specifically for the local level, so no additional translation is required. Both the state and non-profits have created SB 1000 guidance documents and toolkits. ⁵³⁹	This law, which supports housing, reduced pollution, and open space, conflicts with state-level laws surrounding climate change, housing and water access, including: <ul style="list-style-type: none"> • AB 32/SB 32—strategies to achieve these targets include clustered housing near transportation, which would decrease air quality and open space • SB 221, SB 610, SGMA—creating and regulating water access, sometimes impeding housing development • California Density Bonus Law—reducing site development standards such as setbacks and open space requirements.
SB 1275	Establishes the Charge Ahead Initiative, which creates the goal of placing in service at least 1,000,000 zero-emission or near-zero-emission vehicles. ⁵⁴⁰	This law incentivizes local planners to plan for EV vehicles and infrastructure by securing funding for the Clean Vehicle Rebate Project and “direct[ing] [CARB] to establish equity programs such as EV car-sharing programs in disadvantaged communities” along with other electric vehicle financing options.	No.	This law conflicts with certain regulations set by the Department of Weights and Measures and is often too costly for many smaller jurisdictions.
AB 1279	Requires the state to reduce GHG emissions to at least 85% below 1990 levels by 2045 and to achieve net zero GHG emissions no later than 2045.	This law incentivizes local planners to include carbon neutrality goals in their climate action planning documents, including both General Plans and CAPs.	No.	This target creates conflicts for local planners attempting to balance climate-related emissions targets, VMT reductions, and fair housing requirements under AB 686.
AB 1493	Limits GHG emissions from passenger vehicles, creating the Clean Car Standards.	This law creates regulations regarding passenger vehicles that must be followed by local jurisdictions.	Yes. AB 1493’s Pavley regulations created by CARB apply to local governments.	This law conflicts with certain regulations set by the Department of Weights and Measures and is often too costly for many smaller jurisdictions.

⁵³⁹ See e.g., *Best Practices for Implementing SB 1000*, CAL. DEP’T OF JUST. (2022), <https://oag.ca.gov/system/files/media/sb-1000-best-practices-en.pdf>; see also *SB 1000 Toolkit*, CAL. ENV’T JUST. ALL., https://ceja.org/wp-content/uploads/2017/09/SB1000_Toolkit_Final_rev_2018July_web.pdf.

⁵⁴⁰ Cal. Health & Safety Code § 44125.

