1. Local Government Actions are Crucial for Supporting Attainment of the State’s Climate Goals

Local government efforts to reduce greenhouse gas (GHG) emissions within their jurisdiction are critical to achieving the State’s long-term climate goals, and can also provide important co-benefits, such as improved air quality, local economic benefits, more sustainable communities, and improved quality of life. Many jurisdictions are already asserting bold climate leadership, yet meeting the challenge of climate change requires more widespread action at the local level – roughly 35 percent of California’s GHG reduction potential is from activities that local governments have authority or important influence over.1,2 This appendix includes recommendations intended to build momentum for local actions that align with the State’s climate strategies, with a focus on climate action planning and approval of new land use development projects.

This appendix is not exhaustive and does not include everything local governments can do to support State climate goals. For instance, it does not address industrial development or air permitting in detail. This appendix is intended to provide information and clarification on specific topics requested by planners, practitioners, and community groups in response to challenges local jurisdictions face when trying to take supportive climate action or when approving housing projects. This appendix is meant to be used in combination with Chapter 8 of the Governor’s Office of Planning and Research (OPR) General Plan Guidelines,3 which provides guidance and resource materials for developing general plans and climate action plans, the State CEQA Guidelines,4 OPR’s CEQA Technical Advisories,5 as well as guidance from local air districts and the California Air Pollution Control Officers Association (CAPCOA).6

3 California Governor’s Office of Planning and Research. General Plan Guidelines - Chapter 8 Climate Change. Available at: https://opr.ca.gov/planning/general-plan/guidelines.html
5 California Governor’s Office of Planning and Research. Technical Advisories. Available at: https://opr.ca.gov/ceqa/technical-advisories.html
Since the enactment of Assembly Bill (AB) 32 (Nuñez and Pavley, Chapter 488, Statutes of 2006), many local jurisdictions have understandably sought to figure out both how they fit within the context of a global crisis, and what their role is in localizing and downscaling State-level decarbonization and carbon neutrality goals to their communities. With increasing severity and occurrence of droughts and wildfires, the window for action is urgent.

The following sections provide recommendations to local governments to:

- Develop local climate action plans and strategies consistent with the State’s GHG emissions reduction goals;
- Localize State-level GHG priorities when approving individual land use projects; and
- Implement mitigation to reduce GHG emissions associated with CEQA projects.

1.1 Greenhouse gas reductions from local efforts are important to support State-level measures, goals, and changes in technology

The State’s climate goals depend on action by local governments. Local governments have primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can promote development that supports transit, bicycling, and walking. Local governments have authority to adopt building ordinances that exceed statewide building code requirements and play a critical role in facilitating the rollout of zero-emission vehicle (ZEV) infrastructure.

For example, the City of Oakland requires all new construction to be all-electric and is currently working on electrifying existing buildings. In addition, starting in 2023, the City of Sacramento will require all new buildings under three stories to be all-electric and extends the requirement to all new construction by 2026 with some limited exemptions. The City of Sacramento also requires higher than minimum State-required levels of electric vehicle (EV) charging infrastructure in new construction starting in 2023 and provides parking incentives for zero-emission carsharing and EV charging. Local governments asserting this type of leadership are critical partners in supporting State-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment.

Importantly, as elaborated upon in the Sustainable Communities Appendix, ZEVs are not enough to achieve all necessary GHG emissions reductions in the transportation sector to

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7 City of Oakland. Building Electrification. Available at: https://www.oaklandca.gov/projects/building-electrification

8 City of Sacramento. Electrification of New Construction. Available at: http://www.cityofsacramento.org/SacElectrificationOrdinance
meet the State’s climate goals. Vehicle miles traveled (VMT) reductions are necessary to directly and immediately reduce transportation emissions, as well as reduce energy demand and preserve natural and working lands that promote carbon sequestration. Regional and local land use and transportation planning efforts that improve alignment with State climate goals are critical for achieving these needed VMT reductions.

2. The Role of Local Climate Action Planning in Supporting State GHG Goals

Many California local governments have developed plans to tackle climate change, such as a climate action plan (CAP), sustainability plan, or a GHG reduction plan incorporated into a general plan.9 While CAPs have become an important avenue for climate action at the local level, 47 percent of California cities and counties have no known CAP,10 and many jurisdictions find that performing, or hiring consultants to perform, a GHG inventory and developing a CAP is costly and time consuming, regardless of their desire to take action on climate.11 This section seeks to identify the most effective GHG reduction actions at the local level and identify other barriers to local climate action, so that local climate efforts can align with the State’s climate goals.

For purposes of this appendix, a CAP that has been adopted through the California Environmental Quality Act (CEQA) review process and meets the criteria specified in CEQA Guidelines section 15183.5(b) for a “plan for the reduction of greenhouse gas emissions” will be referred to as a “CEQA-qualified CAP.” Under CEQA Guidelines section 15183.5(b), qualifying plans must:

(A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area
(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable
(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area

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9 CARB’s Climate Action Portal Map compiles information about local GHG reduction plans and strategies throughout the State. Available at: https://webmaps.arb.ca.gov/capmap/


(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
(E) Establish a mechanism to monitor the plan’s progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
(F) Be adopted in a public process following environmental review.

Once adopted, sufficiently detailed CAPs designed to achieve an adequately supported GHG emission reduction goal provide local governments with a valuable tool for coordinated climate planning in their community. Under CEQA, individual projects that comply with the strategies and actions within an adequate local CAP that complies with CEQA requirements can streamline the project-specific GHG analysis (Sections 15064.4 (b)(3), 15183.5 of the CEQA Guidelines). Effectively, local governments that adopt a CEQA-qualified CAP enable projects that can demonstrate consistency with the plan to rely upon the GHG reduction plan’s requirements to reduce or mitigate any potential GHG impacts associated with the project. For example, a project can show it is consistent with the CAP if it incorporates all the CAP-identified measures that would apply to the project, such as measures that reduce GHG emissions from building operations. The use of the CEQA-qualified CAP provides more consistent expectations for how GHG reduction measures are applied across projects in the jurisdiction. The State strongly encourages local governments to follow this approach. However, not all jurisdictions have the resources to develop a CAP that will go through the CEQA process.

Whether or not a jurisdiction adopts any type of CAP, local governments have tremendous opportunity to reduce GHGs in these three strategy areas:

1. Transportation electrification
2. VMT reduction
3. Building decarbonization

By prioritizing climate action in these areas, local governments will be addressing the largest sources of emissions under their authority and meaningfully tackling climate change, as well as aligning with State climate goals and protecting public health and welfare. In order to support local governments in taking action in these areas, CARB staff has developed a list of the most impactful strategies (summarized in Table 1). The strategies on this list are not one-size-fits-all, nor are they the only strategies that local governments can adopt, but they represent the core strategies that most jurisdictions in California can adopt and implement to

13 California Governor’s Office of Planning and Research. General Plan Guidelines - Chapter 8 Climate Change. Available at: https://opr.ca.gov/planning/general-plan/guidelines.html
reduce GHG emissions regardless of whether they have developed a GHG inventory or a CAP. If adopted at a sufficient scale, these strategies will address the majority of emissions under local authority in most jurisdictions.

**Table 1 – Priority GHG Reduction Strategies for Local Government Climate Action**

<table>
<thead>
<tr>
<th>Priority Areas</th>
<th>Priority Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Electrification</strong></td>
<td>Convert local government fleets to zero-emission vehicles (ZEV)</td>
</tr>
<tr>
<td></td>
<td>Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as permit streamlining, infrastructure siting, consumer education, or preferential parking policies)</td>
</tr>
<tr>
<td><strong>VMT Reduction</strong></td>
<td>Reduce or eliminate minimum parking standards in new developments</td>
</tr>
<tr>
<td></td>
<td>Adopt and implement Complete Streets policies and investments, consistent with general plan circulation element requirements¹⁵,¹⁶</td>
</tr>
<tr>
<td></td>
<td>Increase public access to shared clean mobility options (such as planning for and investing in electric shuttles, bike share, car share, transit)</td>
</tr>
<tr>
<td></td>
<td>Implement parking pricing or transportation demand management pricing strategies</td>
</tr>
<tr>
<td></td>
<td>Amend zoning or development codes to enable mixed-use, walkable, and compact infill development (such as increasing allowable density of the neighborhood)</td>
</tr>
<tr>
<td></td>
<td>Preserve natural and working lands</td>
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<tr>
<td><strong>Building</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Decarbonization</strong></td>
<td>Adopt all-electric new construction reach codes¹⁷</td>
</tr>
<tr>
<td></td>
<td>Adopt policies and incentive programs to implement energy efficiency retrofits (such as weatherization, lighting upgrades, replacing energy intensive appliances and equipment with more efficient systems, etc.)</td>
</tr>
<tr>
<td></td>
<td>Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings</td>
</tr>
<tr>
<td></td>
<td>Adopt policies and incentive programs to reduce electrical loads from equipment plugged into outlets (such as purchasing Energy Star equipment for municipal buildings, occupancy sensors, smart power strips, equipment controllers, etc.)</td>
</tr>
<tr>
<td></td>
<td>Facilitate deployment of renewable energy production and distribution and energy storage</td>
</tr>
</tbody>
</table>

¹⁴ These areas and strategies are designated “priority” because they are the GHG reduction opportunities over which local governments have the most authority and the highest GHG reduction potential.


¹⁶ California Governor’s Office of Planning and Research. General Plan Guidelines - Chapter 4 Circulation Element. Available at: https://opr.ca.gov/planning/general-plan/guidelines.html

3. The Role of Land Use Plans and Development Projects in Supporting State GHG Goals

Local governments are responsible for adopting and updating land use plans and related implementing ordinances, such as zoning and other development codes, as well as evaluating and making decisions regarding a development project’s impact on the environment. The adoption of, or update to, local plans, as well as local discretionary approvals for new development, are subject to environmental review under CEQA, which requires public agencies, including local governments, to evaluate and disclose potential environmental effects from their discretionary decisions and actions, and implement feasible mitigation. This environmental review process must address whether GHG emissions from proposed projects would result in cumulatively considerable contributions to climate change. The CEQA review process provides local governments with a responsibility to check on whether a proposed project would be consistent with, and supportive of, State climate goals. Section §15064.4(b)(3) of the CEQA Guidelines states that lead agencies should evaluate whether a proposed project would “[c]onflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.” Moreover, CEQA Guidelines Section 15125(d) requires a discussion “of any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans…regional transportation plans …[and]…plans for the reduction of greenhouse gas emissions” among others.

However, the local discretionary processes required to permit land use development projects are not uniformly applied across all local jurisdictions in California.18 Recent research from O’Neill et al. identified local regulations as a primary barrier to the production of new housing.19 These problems are of two general varieties. First, it is often too difficult to build infill development in California due to restrictive local zoning regulations. Second, discretionary review processes give project opponents opportunities to slow or stop projects without advancing legitimate environmental goals. In addition to adding complexity and process to housing development, local regulations that require discretionary review for housing provide an opportunity for abusive litigation by subjecting the project to CEQA review and, by extension, to a potential CEQA lawsuit that challenges the local government’s CEQA compliance. Although litigation rates among entitled projects in the jurisdictions studied were low (less than 3 percent), a greater portion of entitled units faced litigation in

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infill jurisdictions and high-resource areas\textsuperscript{20} than in exurban jurisdictions and low-resource areas. This phenomenon leads to especially perverse outcomes because development in infill areas is typically far less environmentally impactful than development in greenfield areas.\textsuperscript{21} Therefore, a comparatively higher prevalence of environmental litigation against infill development in already-urbanized areas can tend to reflect the personal preferences and biases of neighboring interests, rather than legitimate environmental concerns.

Of the projects that were litigated, two-thirds were challenged based on claimed deficiencies in their analysis of GHG or VMT. Thus, among other bases for CEQA challenges, CEQA GHG impact analyses and mitigation measures continue to be sources of litigation and delay for projects, especially for infill housing projects in high-resource areas.\textsuperscript{22} Though the State has long been clear that urban infill projects would be generally supportive of State GHG reduction and regional air quality goals, such claims can persist.

California continues to experience a severe housing shortage. The State must plan for more than 2.5 million residential units over the next eight years, and no less than one million of those residential units must meet the needs of lower-income households. This represents more than double the housing planned for in the last eight years.\textsuperscript{23} The housing crisis and the climate crisis must be confronted simultaneously, and it is possible to address the housing crisis in a manner that supports the State’s GHG and regional air quality goals.\textsuperscript{24}

### 3.1 Equity and Other Social and Environmental Considerations are Key Elements in Addressing the Climate Crisis

Ensuring that vulnerable communities benefit from efforts to reduce GHG emissions is crucial to the State’s climate strategy. To address housing affordability, social equity, and climate goals simultaneously, government institutions should take on a portfolio of integrated strategies such that housing policies are designed to address climate and climate policies are

\textsuperscript{20} High-resource areas are census tracts that are characterized by low poverty, high educational attainment, high employment, low pollution burden, and other factors as defined by the California Fair Housing Tax Force’s Opportunity Mapping methodology, available at: https://www.treasurer.ca.gov/ctcac/opportunity/2020-ctcac-hcd-methodology.pdf.


\textsuperscript{23} California Department of Housing and Community Development. 2022. Statewide Housing Plan. Available at: https://www.hcd.ca.gov/docs/statewide-housing-plan.pdf

\textsuperscript{24} Elkind, E. N., Galante, C., Decker, N., Chapple, K., Martin, A., & Hanson, M. 2017. “Right Type, Right Place: Assessing the Environmental and Economic Impacts of Infill Residential Development through 2030.” Available at: https://ternercenter.berkeley.edu/research-and-policy/right-type-right-place/
These strategies are designed to advance housing. Indeed, in many cases land use strategies that support more compact development in infill areas have the greatest potential to reduce emissions.

The issues that shape where development goes are complex, but the location and type of new housing that is developed matters for climate, health, equity, and the future prosperity of all Californians. Accelerating housing production to meet the extraordinary need for more homes can help reduce VMT and GHG emissions and advance health and equity objectives when new housing is created in types and locations that align with these goals, and particularly when accompanied by complementary policies and investments to create sustainable communities and prevent displacement of existing residents. See the Sustainable Communities Appendix for strategies the State can undertake to foster sustainable communities.

Building new housing in transportation-efficient areas is a key strategy for climate, equity, health, and affordability. These climate-smart areas can include neighborhoods, commercial corridors, town centers, downtowns, or other areas where residents have non-auto mobility options like transit, walking, and biking; and where housing, jobs, and other key destinations are located near each other. Such communities make it possible for residents to live, work, and recreate without having to purchase and pay for the upkeep of a personal car and, when people must drive, car trips are relatively short. The predominant historical land use development practice that centers on mobility (how far you can go in a given amount of time) over accessibility (how much you can get to in that time) has not resulted in equitable outcomes for non-white and low-income households, and in fact, has exacerbated barriers to access and upward economic mobility. Increasing housing opportunities in transportation-efficient areas is an important strategy for GHG emissions reductions.

However, ensuring that the households that would benefit most from living in more accessible areas are not displaced by new housing development requires that the State, regional, and local governments proactively anticipate and avoid potential unintended equity and social consequences, including gentrification and displacement of vulnerable communities. The most recent wave of displacement stems from a variety of factors: zoning, job growth and reinvestment, changing housing preferences among white households, local actions and NIMBYs blocking new housing development, and a dearth of practices to preserve existing affordable housing. These variables work together to drive up housing prices and rents, making it unaffordable for many low-income households, and thereby forcing them out of their established neighborhoods to move to other areas. The outcomes of this displacement can undermine the equity goals that drive policies to increase affordable, infill housing—they force people into car-dependent neighborhoods away from

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25 See resources posted at the Urban Displacement Project: https://www.urbandisplacement.org/about/what-are-gentrification-and-displacement/
community support systems and economic opportunities and increase households’ combined 
housing and transportation costs.26 Actions that facilitate both market rate and subsidized 
affordable housing production in infill neighborhoods should, over time, stabilize housing 
costs, protect against displacement, and create new housing opportunities in transportation-
efficient neighborhoods.

There are tools and strategies that communities and local jurisdictions can utilize to 
proactively avoid displacement while facilitating much-needed new market-rate and 
affordable housing development. The State encourages local jurisdictions and communities 
to cooperatively develop strategic anti-displacement and neighborhood stabilization plans. 
Some California jurisdictions have already begun pursuing these strategic plans (e.g., 
Oakland’s Roadmap to Promote Housing Equity27 and the City of San Jose’s Citywide Anti-
Displacement Strategy28). Jurisdictions and communities that have not yet begun exploring 
localized anti-displacement strategies can reference lessons learned from other jurisdictions 
and may also find useful a 2021 CARB-funded literature review that examines the real-world 
effectiveness of various anti-displacement strategies.29 In addition to documenting the 
efficacy of different strategies, the literature review also notes each strategy’s potential to 
prevent displacement, the market type where the strategy is most effective, the 
implementation scale, and the timeframe for preventing displacement.

Another tool that recognizes local jurisdictions that are taking actions to accelerate housing 
production while promoting holistic land use planning, climate goals, and VMT reduction is 
the Department of Housing and Community Development’s (HCD) recently established 
Prohousing Designation Program.30 Elements of the Prohousing designation are particularly 
strong at simultaneously promoting multiple objectives including: increasing housing supply, 
affirmatively furthering fair housing while preserving existing affordable housing, and 
supporting VMT reduction. Communities that receive the Prohousing designation can receive 
additional points or preference in the scoring of State competitive housing, community 
development, and infrastructure funding programs.

27 City of Oakland. 2015. A Roadmap Toward Equity: Housing Solutions for Oakland, California. Available at: 
28 City of San Jose. 2019. Community Strategy to End Displacement. Available at: 
https://www.sanjoseca.gov/your-government/departments-offices/housing/resource-library/housing-policy-
plans-and-reports/citywide-anti-displacement-strategy
Effectiveness.” CARB Research Contract Number 19RD018. Available at: 
https://ww3.arb.ca.gov/research/single-project.php?row_id=68795
30 Department of Housing and Community Development. 2022. Prohousing Designation Program. Available at: 
https://www.hcd.ca.gov/community-development/prohousing/index.shtml
3.2 Evaluating Plan-Level and Project-Level Alignment with State Climate Goals

Land use plans (e.g., general plans, specific plans, etc.) and development projects have long operational lifespans and the potential to lock in GHG emissions for decades. Lead agencies have a responsibility to evaluate whether proposed plans or development projects would be consistent with, and supportive of, State climate goals, but there is currently limited guidance about how to conduct such an evaluation. This section outlines three approaches that lead agencies may consider for evaluating alignment of proposed plans, along with residential and mixed-use, development project types, with State climate goals. CARB plans to continue to explore approaches for other types of development in future.

Project Attributes that Reduce GHGs

The first approach that the State recommends for proposed land use developments to demonstrate that they are aligned with State climate goals is based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. In line with the Priority Strategies from Table 1, empirical research shows that the following project attributes reduce GHG emissions from residential development. Residential projects that accommodate growth in a manner consistent with the GHG and equity goals of Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016) have all of the following attributes:

- At least 20 percent of the units are affordable to lower-income residents;\(^\text{31, 32}\)
- Result in no net loss of existing affordable units;
- Utilize existing infill sites that are surrounded by urban uses, and reuse or redevelop previously developed, underutilized land presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer); \(^\text{33}\)

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32 California Housing Partnership Corporation and TransForm. 2014. “Why Creating and Preserving Affordable Homes Near Transit is a Highly Effective Climate Protection Strategy.” Available at: https://www.transformca.org/sites/default/files/CHPC%20TF%20Affordable%20TOD%20Climate%20Strategy%20BOOKLET%20FORMAT.pdf

33 California Government Code §§ 65041.1. “Statewide Environmental Goals and Policy Report.” Available at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&amp;sectionNum=65041.1
California Air Resources Board  
Draft 2022 Scoping Plan  May 2022

- Include transit-supportive densities (minimum of 20 residential dwelling units/acre\textsuperscript{34}), or are in proximity to existing transit (within ½ mile),\textsuperscript{35} or satisfy more detailed and stringent criteria specified in the region’s Sustainable Communities Strategy (SCS), for “SCS consistency” that would go further to reduce emissions;\textsuperscript{36}
- Do not result in the loss or conversion of the State’s natural and working lands;
- Use all electric appliances, without any natural gas connections, and would not use propane or other fossil fuels for space heating, water heating, or indoor cooking;\textsuperscript{37, 38}
- Provide EV charging infrastructure at least in accordance with CalGreen Tier 2 standards;\textsuperscript{39} and
- Relax parking requirements\textsuperscript{40} by:
  - Eliminating parking requirements or including maximum allowable parking ratios.
  - Providing residential parking supply at a ratio of <1 parking space per unit;
  - Unbundling residential parking costs from costs to rent or lease.

This list is intended to provide a guide as to those residential projects that are \textit{clearly} consistent with the State’s climate strategy for CEQA purposes. There is generally no evidentiary support for an argument that projects with all of these attributes would present potentially significant GHG/climate change impacts under CEQA. By incorporating the attributes on this list, residential and mixed-use projects will be addressing their largest sources of emissions, aligning with the Priority Areas for local climate action (Table 1), as well as aligning with State climate goals. Indeed, even projects with some (but not all) of these


\textsuperscript{35} Washington Department of Transportation. 2013. \textit{Tools for Estimating VMT Reductions from Built Environment Changes}. Available at: \url{https://www.wsdot.wa.gov/research/reports/fullreports/806.3.pdf}

\textsuperscript{36} One example of an evaluation of consistency with the region’s SCS is from the 2013 draft EIR for The Cannery in Davis, p. 3.7-26. Available at: \url{https://www.cityofdavis.org/home/showpublisheddocument/650/635607772224000000}


\textsuperscript{38} Energy and Environmental Economics. 2021. \textit{Achieving Carbon Neutrality in California: PATHWAYS Scenarios Developed for the California Air Resources Board}. Available at: \url{https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf}


attributes may well be consistent with the State’s climate strategy, though they will likely need to provide further evidence to demonstrate consistency.

This approach to determining the significance of GHG impacts only addresses residential and mixed-use development projects. The State provides it as a recommendation only; it is not a requirement, and it does not supplant lead agencies’ discretion to develop their own evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions (CEQA Guidelines Section §15064.4). The following sections (3.2.2. and 3.2.3) describe alternative approaches that may also be appropriate.

**Net Zero May be Appropriate for Some Projects**

The second approach to project-level alignment with State climate goals is net zero GHG emissions. Absent consistency with an adequate, geographically specific GHG reduction plan (Section 2) or consistency with the full list of attributes identified above, lead agencies should impose GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, may be an appropriate overall objective for new residential development. This approach may not be feasible or appropriate for every project; however, there are recent examples of land use development projects in California that have demonstrated that it is feasible to design projects that achieve zero net additional GHG emissions. Several projects have received certification from the Governor under AB 900, the Jobs and Economic Improvement through Environmental Leadership Act (Buchanan, Chapter 354, Statutes of 2011), and a similar program was authorized under SB 7 (Atkins, Chapter 19, Statutes of 2021), demonstrating an ability to design economically viable projects that create jobs while contributing no net additional GHG emissions.41

Examples of housing developments that have committed to net-zero GHG emissions include the Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan,42 in which the applicant, Newhall Land and Farming Company, proposed a commitment to achieve net zero GHG emissions for a very large-scale residential and commercial specific-planned development in Santa Clarita Valley through a combination of mitigation measures and voluntary GHG offsets. More recently, Tejon Ranch Company, the developer for the Centennial Specific Plan Project located in northern Los Angeles County,43


43 Los Angeles County Department of Regional Planning. 2019. Specific Plan No. 02-232 / Centennial Specific Plan. Available at: https://planning.lacounty.gov/case/view/specific_plan_no_02_232_centennial_specific_plan
committed through a legal settlement agreement that the project would result in no net additional GHG emissions. Specifically, Tejon Ranch Company committed to prohibit natural gas in residential and commercial properties, require solar energy in residential and commercial properties, install almost 30,000 EV chargers within and outside the community, and provide incentives supporting the purchase of 10,500 electric vehicles, school buses, and trucks, in addition to procuring voluntary GHG offsets. Note that Section 4 of this appendix seeks to improve clarity on the appropriate application of GHG mitigation under CEQA.

**Air District–Adopted Thresholds of Significance**

The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted. Thresholds of significance, as described generally in CEQA Guidelines section 15064.7, are intended to clarify the level at which GHG emissions from proposed development are considered significant, although these thresholds can become outdated if they are not aligned with the State’s increasingly ambitious GHG reduction goals. Mitigating GHG emissions below an applicable GHG threshold of significance is one way that lead agencies may demonstrate that a project’s GHG emissions have a less-than-significant impact on the environment. For lead agencies that pursue this approach, the California Air Pollution Control Officers Association (CAPCOA), which provides a forum for the sharing of knowledge, experience, and information between AQMDs and APCDs throughout the State, has developed tools and guidance for CEQA practitioners, such as the California Emissions Estimator Model (CalEEMod) and guidance for developing and quantifying project-level GHG mitigation measures.

**4. Overcoming Barriers to CEQA GHG Mitigation**

When a lead agency determines that a proposed project would result in significant GHG effects, the lead agency must impose feasible design features and mitigation measures to minimize the impact. Historically, lead agencies have focused on on-site GHG mitigation measures, but as the severe impacts of climate change become better understood and the

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45 Available at: www.caleemod.com.


State’s climate goals become more stringent over time, local off-site GHG mitigation measures will be necessary. These mitigation measures applied in the communities impacted by projects subject to CEQA have the added co-benefit of reducing toxic air contaminants and criteria air pollutants, which will improve health, social, and economic resiliency as climate impacts worsen. However, several factors hinder adoption of local, off-site GHG mitigation. These include confusion about CEQA’s requirements for GHG mitigation projects, a lack of awareness of local GHG mitigation opportunities, a perception of high mitigation project costs, and high administrative costs for lead and responsible agencies. While this section identifies ways to overcome some common barriers to local CEQA GHG mitigation, some barriers may take longer to remove, and others may require legislative or other State-level action. Through appropriate application of local GHG mitigation under CEQA, lead agencies have an opportunity to benefit their communities while addressing the climate crisis. The desired outcomes of this section are to:

a. Reduce the use of “overriding considerations” by lead agencies and prioritize local GHG mitigation when feasible;
b. Encourage project proponents and local governments to use local, off-site mitigation options consistent with CEQA’s requirements; and
c. Encourage regional collaboration to reduce barriers to the development of a stronger market for local GHG mitigation

4.1 GHG Mitigation Hierarchy

CEQA requires lead agencies to impose all mitigation measures that are necessary to avoid or reduce GHG emissions to a less-than-significant level where feasible prior to final EIR certification. CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological, or other reasons. If there are not sufficient mitigation measures that the lead agency determines are feasible to avoid or reduce GHG emissions to a less-than-significant level, the lead agency must adopt those measures that are feasible, and may adopt a Statement of Overriding Considerations (or significance “override”) that explains why further mitigation is not feasible. The statement of overriding considerations must be supported by substantial evidence in the record.

There is a wide array of feasible GHG mitigation that can avoid the need for adoption of statements of overriding considerations. The State recommends prioritizing GHG mitigation

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actions according to a geographic hierarchy as follows: on-site opportunities; local, off-site GHG mitigation; and GHG offsets that meet CEQA’s requirements.

Senate Bill 749 is a recent example in which the Legislature mandated this approach, prioritizing on-site and local, off-site mitigation measures for certain land use development projects to demonstrate that they would result in no net additional GHG emissions for purposes of being eligible for benefits provided by the bill. The statute requires that lead agencies first reduce direct emissions from the project. Any remaining unmitigated impact should be mitigated “by direct emissions reductions that also reduce emissions of criteria air pollutants or toxic air contaminants within the same air pollution control district or air quality management district in which the project is located.” For the remaining GHG emission reductions necessary, the statute requires prioritization of offset credits “that originate within the same air pollution control district or air quality management district in which the project is located,” and as a last resort, offsets that “originate from sources that provide a specific, quantifiable, and direct environmental and public health benefit to the region in which the project is located.”

The recent settlement agreement applicable to the Centennial Specific Plan in Los Angeles County also applied a geographic hierarchy for GHG mitigation, specifying that at least 51 percent of mitigated emissions should take place within the project, 69.5 percent within California, 82.25 percent within the United States, and no more than 17.75 percent from international projects. The geographic hierarchy of GHG mitigation is feasible, as demonstrated by these examples.

The following sections elaborate on the conditions that apply to this hierarchy. In general, the State encourages prioritizing GHG mitigation measures that result in environmental and economic benefits for communities near the CEQA project, as discussed further below.

4.1.1 On-site GHG Mitigation

As noted above, lead agencies should prioritize on-site design features that minimize GHG emissions to begin with, but for many projects there remain further opportunities for GHG mitigation measures on the project site, such as methods to reduce VMT and support building decarbonization, access to shared mobility services or transit, and EV charging (refer to Section 3). “By definition, mitigation measures are not part of the original project design. Rather, mitigation measures are actions required by the lead agency to reduce impacts to the


50 Cal. Code of Regs., tit. 14, §§15126.4 (c)(2) and (3). Available at: https://govt.westlaw.com/calregs/Document/I4A286D0BCC4B49D6BAEC3C19188A12E1
environment resulting from the original project design. Mitigation measures are identified by the lead agency after the project has undergone environmental review and are above-and-beyond existing laws, regulations, and requirements that would reduce environmental impacts.”

4.1.2 Local, Off-site GHG Mitigation

After exhausting all on-site GHG mitigation measures, the State recommends prioritizing investment in local, off-site GHG mitigation measures, including both direct investment and voluntary offsets, in the communities or neighborhoods in the vicinity of the project. Implementing GHG mitigation measures in the project’s vicinity may allow the project proponent and the lead agency to work directly with the impacted community to identify and prioritize the mitigation measures that meet its needs while minimizing multiple environmental and societal impacts. This may also help build relationships for future mutually beneficial development and mitigation opportunities in that community.

The impacts of climate change pose an immediate and growing threat to California’s economy, environment, and public health. While GHG emissions have a global impact, cities and counties will continue to experience the effects of climate change locally, including through increased likelihood of droughts, flooding, wildfires, heat waves, and severe weather. The State recommends that lead agencies prioritize GHG mitigation that also increases communities’ social and economic resilience to these climate impacts.

Direct, local investment can provide a multitude of other co-benefits to the neighborhood’s residents as well. Examples of local investments include:

1. Local urban forestry projects that can sequester carbon, reduce air pollution and ambient temperatures, help manage stormwater and improve water quality, provide shade to reduce energy demand for cooling buildings (and the associated cost of that energy), improve aesthetics and mental health, and encourage physical activity of residents and employees, among many other benefits.

2. Local building retrofit programs that can pay for cool roofs, solar panels, solar or heat pump water heaters, smart meters, energy efficient lighting, energy efficient and electric appliances including heating and cooling systems, energy efficient windows, insulation, and water conservation measures for existing homes within the project’s vicinity. These investments can save people money on their utility bills and help manage the demand for electricity while reducing GHG emissions.

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52 Governor’s Office of Planning and Research. 2018. Discussion Draft: CEQA and Climate Change Technical Advisory. Available at: https://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Advisory.pdf
3. Other local direct investments with direct co-benefits include financing installation of electric vehicle charging stations; funding the electrification of public school buses; and investing in local, clean, shared mobility services.

Some have doubted the acceptability of some potential local, off-site GHG mitigation measures (including voluntary offsets) based on the concern that GHG emission reductions from many of these measures double count GHG emission reductions from California’s Cap-and-Trade program. However, mitigation measures such as EV charging or building efficiency retrofits (that are not otherwise required by law or regulation) are viable options for mitigation under CEQA because they would not have happened but for the mitigation requirements of the project.

4.1.3 Conditions Applicable to GHG Offsets

Once all potential on-site and local, off-site GHG mitigation measures have been incorporated to the extent feasible, other voluntary offsets issued by a reputable voluntary carbon registry as listed on CARB’s website, may be appropriate. For example, a project applicant could find opportunities for in-state mitigation through the California Carbon Sequestration and Climate Resiliency Project Registry directed under SB 27, provided the project was not otherwise required. Starting in 2023, this registry will be maintained by the Natural Resources Agency for the purposes of identifying and listing projects in the State that drive climate action on the State’s natural and working lands and are seeking funding from State agencies or private entities. Lead agencies should use substantial evidence to demonstrate that the project proponent explored and prioritized investing in feasible, local mitigation prior to moving mitigation to a geography located farther away from the project.

4.2 Clarifying CEQA’s Requirements for GHG Mitigation

According to the CEQA Guidelines, mitigation measures must be feasible, roughly proportional, not inappropriately deferred, capable of being monitored or reported, fully enforceable, and based on substantial evidence. They must also have a nexus to a legitimate governmental interest. Lastly, GHG mitigation, including offsets, must not be otherwise required.

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Over the years, agencies and courts have provided direction and guidance regarding GHG mitigation. Nevertheless, given the variety of potential projects and mitigation scenarios, some uncertainty and misconceptions persist. For example, when lead agencies consider off-site GHG mitigation (including offsets), they may sometimes conflate the requirements for compliance-grade offsets in California’s Cap-and-Trade regulation with the requirements for GHG mitigation measures under CEQA. The Cap-and-Trade regulation requires that compliance offsets meet certain regulatory criteria, which specify that compliance offsets must be real, additional, quantifiable, permanent, verifiable, and enforceable. In general, the State’s Cap-and-Trade Program restricts compliance offsets from being used for any purpose other than Cap-and-Trade compliance, including being used as mitigation under CEQA.

The State recommends that lead agencies focus on applying the requirements specified in the CEQA Guidelines when designing GHG mitigation measures – whether local, off-site mitigation or offsets – rather than the requirements used for compliance offsets within California’s Cap-and-Trade program. The concept of “not otherwise required” in the CEQA Guidelines – and its relation to the corresponding requirement of “additionality” in California’s Cap-and-Trade program – has been a particularly challenging issue for lead agencies. Specifically, the State recommends that lead agencies focus specifically on providing GHG mitigation under CEQA that is “not otherwise required” by statute, regulation, an existing local program, or by existing, permitted land use projects. Lead agencies should use substantial evidence to document that a specific mitigation measure is “not otherwise required” and would not have occurred at that time but for the requirement to mitigate a project’s GHG impacts. Figure 1 identifies examples of off-site GHG mitigation

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56 In a recent case against the County of San Diego, the plaintiffs (Golden Door Properties LLC and the Sierra Club) challenged the County’s CAP, related Guidelines for Determining Significance, and related Supplemental Environmental Impact Report (EIR) claiming that the CAP did not adequately mitigate emissions from the County’s General Plan. The Fourth District Court of Appeal (Division One) examined a specific instance of voluntary offsets included in the San Diego County CAP’s Supplemental EIR to address GHG impacts from proposed future projects requiring general plan amendments. The court determined that the Supplemental EIR did not ensure the enforceability of the offsets used to mitigate emissions from these projects. Using the requirements for offsets under the State’s Cap-and-Trade Program as a proxy for evaluating enforceability under CEQA, the court found that the Supplemental EIR did not demonstrate that the offsets would be real, additional, quantifiable, permanent, verifiable and enforceable. Golden Door Properties, LLC v. County of San Diego, 50 Cal.App.5th 467 (2020). Retrieved from: https://law.justia.com/cases/california/court-of-appeal/2020/d075328.html.


that would not have occurred but for the requirement to mitigate a project’s GHG impacts and could therefore meet the criterion of “not otherwise required.”

It is important to note that the existence of state-level programs does not remove the need for local climate action. These programs generally do not regulate local matters and are intended to operate against the background of local actions as a shared portfolio. For instance, it would not be appropriate to rely upon the State’s Cap-and-Trade Regulation as a reason not to provide appropriate GHG analysis and, if needed, mitigation, for local development projects. Furthermore, applying a local lens to GHG mitigation and allowing for local and community-led decision-making can help prioritize the mitigation measures that address community-identified needs and can also help fill gaps in the existing local approach to climate action.

**Figure 1: Examples of Off-site GHG Mitigation that is “Not Otherwise Required”:**

**Off-site EV Chargers:** If a project proponent intends to fund off-site EV charging infrastructure through an existing EV charger installation program as a GHG mitigation measure, the lead agency should document that 1) the funded infrastructure is not already required in any statute, regulation (e.g., Title 24, part 11) or by any local ordinance, and 2) the funded infrastructure would not already have been funded by an existing electric vehicle supply equipment (EVSE) installation program (e.g., the funds are directed toward households or locations that would not be eligible to use the existing program funds and/or the funds provided go beyond the current funding available in the program) or existing, permitted land use project.

**Energy Efficiency Retrofits:** If a project proponent intends to fund energy efficiency retrofits, the lead agency should document that 1) the funded retrofits are not already required in any statute, regulation (e.g., Title 24, parts 6 or 11) or by any local ordinance, and 2) the funded retrofits would not already have been funded by an existing program or existing, permitted land use project.

**Public Transit Subsidies:** If a project proponent intends to provide public transit subsidies through an existing subsidy program as a GHG mitigation measure, the lead agency should document 1) what the cost of public transit for beneficiaries of the program would be without the new subsidies, and 2) that the subsidy would not already have been funded through another program (e.g., the funds are directed toward riders or locations that would not be eligible to use the existing program funds and/or the funds provided go beyond the current funding available for that community) or existing, permitted land...
4.3 Overcoming Barriers Through Regional Collaboration

Regional frameworks may be key to overcoming barriers to successful local mitigation, and have tremendous potential to increase local opportunities for feasible mitigation under CEQA that also benefit communities impacted by the project. In this context, regional collaboration involves bringing together community leaders, agencies, academia, industry, and other stakeholders across jurisdictions within a region to share expertise, information, lessons learned, and strategies to promote effective, local, off-site GHG mitigation.  

Regional collaboration can help address barriers such as project and administrative costs and lack of awareness of off-site GHG mitigation projects. This could include leveraging existing collaboratives and partnerships or establishing new ones. Collaboration can help increase awareness of local mitigation opportunities for project proponents, improve connections with existing programs that offer potential mitigation measures, and alert landowners or potential mitigation site owners to mitigation project opportunities, all in an effort to support a local voluntary mitigation market. Regional collaboration can also help site owners aggregate smaller mitigation projects to reduce costs and increase efficiency of mitigation projects and can leverage expertise on project types and quantification methodologies.

Collaboration can also lend support for lead agencies and air districts as they verify and enforce GHG mitigation commitments. For example, the counties and cities of San Luis Obispo and Santa Barbara, Ventura County, the San Luis Obispo Air Pollution Control District, LegacyWorks and the Community Environmental Council have formed a Regional GHG Collaboration Group and are conducting a series of workshops to inform agricultural stakeholders, developers, decision-makers, and other stakeholders about local GHG mitigation opportunities, including offsets, and avenues for better regional connections to support the market for local mitigation.

Supporting the local voluntary mitigation market will help a city or region capture mitigation dollars, and provide local benefits that purchasing distant out-of-state or international offsets do not, while providing greater transparency and enforceability. Keeping GHG mitigation dollars within communities is also a strategy to address community needs and ongoing underinvestment in vulnerable communities.

There may also be a role for the State to ensure that all regions have access to mitigation opportunities. One potential avenue to accomplish this would be through the creation of a statewide mitigation bank for CEQA mitigation purposes.

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60 Examples of existing Regional Collaboratives: https://arccacalifornia.org/about/collaboratives/
5. Conclusion

Local governments are essential partners in California’s efforts to reduce GHGs. Their unique authorities allow them to shape growth and development patterns within their jurisdiction, and as a result, local actions remain critical for containing the growth in GHG emissions from the built environment and transportation. Local leadership is already paving the way for reducing emissions in these sectors, and this appendix seeks to inform jurisdictions about opportunities to promote transportation electrification, VMT reduction, and building decarbonization through:

- Developing local climate action plans and strategies consistent with the framework described in Section 2: “The Role of Local Climate Action Planning in Supporting State GHG Emissions Reduction Goals;”
- Localizing State-level GHG priorities when approving individual land use projects consistent with Section 3: “The Role of Land Use Development Projects in Supporting State GHG Emissions Reduction Goals;” and
- Implementing mitigation to reduce GHG emissions associated with CEQA projects, consistent with Section 4: “Overcoming Barriers to CEQA GHG Mitigation.”

California must accommodate population and economic growth in a far more sustainable and equitable manner than in the past. California’s climate trajectory relies on local efforts that help implement the State’s priorities. The recommendations provided in this appendix are non-binding and should not be interpreted as a directive to local governments but rather as evidence-based analytical tools to assist local governments with their role as essential partners in achieving California’s climate goals.