

# Sustainable Energy Incubator

Technical Assistance Resource – Climate Action and Adaptation Plans

## Applicable Subject Areas

- Climate action and adaptation plans

## Type of Support Requested:

- Review of the city's existing initiatives and understand if there is anything else they could or should be doing to help the city achieve its climate action goals

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LGC staff spoke with city staff regarding the scope of their interests. The following compilation of information responds to the city's request for technical assistance by reviewing the key elements of the city's most recent Climate Action Plan (CAP), and provides suggestions for corresponding updates or adjustments based on current examples.

## Climate Action Plan (CAP) Review Matrix

Key Elements of the city's most recent Climate Action Plan	Possible updates or additions to next Climate Action Plan. What is new in this space.	References or Resources
<p>"As environmental concerns have grown increasingly urgent, however, [the city's] community members, employees, and elected officials have in turn expressed a strong desire for the city to continue to take aggressive action to do its part to reduce its ecological footprint and remain a national leader in environmental and social initiatives. Implementing the CAP will help maintain [the city's] leadership position on environmental issues and will reduce communitywide GHG emissions."</p>	<p>Consider framing CAPs around motivation (vision) and around specific, measurable goals.</p> <p>Some local governments have been framing CAPs around aspirational goals ("Carbon Free by 2030") or aligning with State goals or statute ("80% below 1990 levels by 2050"). Others have included broader mandates, including equity, economic development and other issues relevant to their jurisdiction.</p> <p>Expanded justification for CAP and Adaptation planning:</p> <p>Recent moves by both the insurance and investment sectors, recognizing the risks associated with climate change, local government's obligations to do their part to mitigate harm and prepare for impacts. Insurance rates rising. Climate harms won't be included as a normal part of covered events but will move to specific coverage (like earthquake insurance), and cities/counties failing to address either/both mitigation and adaptation will see a reduction in their bond ratings, making the cost of borrowing higher.</p>	<p>The following articles describe the links between liability for climate change impacts and risks or perils associated with climate change impacts which can impact both the bond rating of an organization, and the insurance costs (or the insurance costs/insurability) for its residents.</p> <ul style="list-style-type: none"> <li>• <a href="https://www.bloomberg.com/opinion/articles/2019-07-25/moody-s-links-with-four-twenty-seven-to-price-climate-risk">https://www.bloomberg.com/opinion/articles/2019-07-25/moody-s-links-with-four-twenty-seven-to-price-climate-risk</a></li> <li>• <a href="https://blogs.ei.columbia.edu/2019/08/05/moodys-acquisition-climate-risk/">https://blogs.ei.columbia.edu/2019/08/05/moodys-acquisition-climate-risk/</a></li> <li>• <a href="https://www.reinsurancene.ws/climate-change-liability-poses-serious-risk-to-profitability-clyde-co/">https://www.reinsurancene.ws/climate-change-liability-poses-serious-risk-to-profitability-clyde-co/</a></li> </ul>
<p>A 2006 report by the California Climate Change Center indicates that summers in the Los Angeles area will become hotter, with a doubling (or more) of the number of heat wave days per year by 2100. In addition, the region will see a 75–85% increase in the number of days with poor air quality and high ground level ozone concentrations. Hotter, smoggier days</p>	<p>California's 4th Climate Assessment has regional studies. The overall assessment is broken down into regionalized projections of heat, precipitation and other effects.</p> <p>The 4th Climate Assessment also provides local governments a suite of tools to aid in regional land use, transportation and other types of planning.</p>	<p>The science of regional impacts of global climate change has become more accurate and detailed.</p> <p>The following resources can provide the city, and its regional partners with information and guidance for scenario planning.</p>

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<p>mean more stress on electricity and water supplies, more heat-related injuries, and additional strain on people with respiratory and cardiovascular diseases.</p>	<p>It is suggested that these data and resources be integrated into the foundational projections and goals the city sets as part of its next Mitigation/Adaptation plan.</p>	<ul style="list-style-type: none"> <li>• <a href="http://www.climateassessment.ca.gov/">http://www.climateassessment.ca.gov/</a></li> <li>• <a href="http://www.climateassessment.ca.gov/regions/">http://www.climateassessment.ca.gov/regions/</a></li> <li>• <a href="http://www.climateassessment.ca.gov/tools/">http://www.climateassessment.ca.gov/tools/</a></li> </ul>
<p>Key legislation pertaining to California’s reduction targets are described below.</p>	<p>Since 2011, there have been additional legislative and regulatory actions which should be considered as the city evaluates the scope, priorities and resources necessary to address is mitigation and adaptation priorities.</p>	<p>Of note, since the city’s last update of their CAP in 2012, new requirements from climate and energy related legislation should be considered.</p> <p>This table provides a comprehensive list of and brief descriptions for key California energy and climate action legislation from 1998 through 2017.</p> <ul style="list-style-type: none"> <li>• <a href="https://www.climatechange.ca.gov/state/legislation.html">https://www.climatechange.ca.gov/state/legislation.html</a></li> </ul> <p>Climate and energy related bills passed in 2018 and 2019 which should be considered. A good resource for legislative and policy information and related analyses (with some good graphics as well) can be found at the LAO office’s website, here:</p> <ul style="list-style-type: none"> <li>• <a href="https://lao.ca.gov/Publications/Report/3911">https://lao.ca.gov/Publications/Report/3911</a></li> </ul>

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<p>“On October 1, 2007, [the city] adopted one of the nation's first mandatory green building ordinances.”</p>	<p>Since the city’s leadership on GB, advances in policy and programs have occurred around “zero net energy”: the CPUC’s ZNE roadmap, the new CalGreen Code, the adoption of ‘Reach Codes’ (those going beyond CalGreen), etc.</p> <ul style="list-style-type: none"> <li>● Possible Action: Add ‘review the city building codes against ghg inventory and other regional goals/benchmarks. Identify one or more Reach Code opportunities (i.e. “Building Electrification” or other Reach codes)</li> <li>● Possible Action: Ensure the city’s planning/ building / permitting staff are fully trained and supported to implement code changes, can provide streamlined permitting processes where the city leadership prioritizes actions, and is equipped to transition to an increasingly computer/on-line based permitting process.</li> </ul>	<p>The CPUC website provides some helpful guidance on ZNE in general:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.cpuc.ca.gov/ZNE/">https://www.cpuc.ca.gov/ZNE/</a></li> </ul> <p><i>“In 2007, the California Public Utilities Commission (CPUC) adopted the new goals to have all residential construction in California be zero net energy by 2020, and all new commercial construction in California be zero net energy by 2030.”</i></p> <p>More detailed guidance regarding commercial and residential paths to ZNE is provided here:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.cpath2zne.org/">https://www.cpath2zne.org/</a></li> </ul> <p>For development of Reach codes, the following resources offer helpful technical assistance, benchmarking and examples, and cost-effectiveness analysis examples which the city might be able to draw from.</p> <ul style="list-style-type: none"> <li>● <a href="https://eecoordinator.info/tag/reach-codes/">https://eecoordinator.info/tag/reach-codes/</a></li> <li>● <a href="https://localenergycodes.com/">https://localenergycodes.com/</a></li> <li>● <a href="https://www.bayrencodes.org/reachcodes/">https://www.bayrencodes.org/reachcodes/</a></li> <li>● <a href="https://ww2.energy.ca.gov/title24/2016standards/ordinances/">https://ww2.energy.ca.gov/title24/2016standards/ordinances/</a></li> </ul>
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## Climate Action Plan (CAP) Review Matrix

<p>“The city adopted a polystyrene ban in 1990. The ban prohibits use of polystyrene containers... Enforcing this ban has been a challenge.”</p>	<p>Circular Economy issues are coming to the fore. Issues associated with materials management: waste disposal, recycling, re-use, supply chain/ service chain and extended producer responsibility – will become drivers of change. These may be accelerated and enforced by State-level policy (diversion mandates) or local ordinance (bag or polystyrene bans), economic and trade issues (China’s refusal of US plastic waste for recycling) or public opinion and concerns.</p>	<p>The following list will provide many benchmarking opportunities:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.cawrecycles.org/polystyrene-local-ordinances">https://www.cawrecycles.org/polystyrene-local-ordinances</a></li> </ul> <p>This short article also offers some helpful links and encouragement:</p> <ul style="list-style-type: none"> <li>● <a href="https://storyofstuff.org/blog/styrofoam-bans-are-sweeping-across-the-nation/">https://storyofstuff.org/blog/styrofoam-bans-are-sweeping-across-the-nation/</a></li> </ul> <p>Circular economy ideas and issues are gaining momentum, although at this time, there may not be very much traction for sweeping action. The following resource may provide useful insights:</p> <ul style="list-style-type: none"> <li>● <a href="http://reports.weforum.org/toward-the-circular-economy-accelerating-the-scale-up-across-global-supply-chains/from-linear-to-circular-accelerating-a-proven-concept/">http://reports.weforum.org/toward-the-circular-economy-accelerating-the-scale-up-across-global-supply-chains/from-linear-to-circular-accelerating-a-proven-concept/</a></li> </ul>
<p>“A proposed ban on plastic bags is currently being considered for further action by the city.”</p>	<p>The maturity and acceptance of the concepts of ‘circular economy’. Re-designing the way materials and products are designed to create a ‘closed loop’ where materials are never ‘wastes’ once their first useful life/purpose is through.</p> <ul style="list-style-type: none"> <li>● Are there opportunities for and expansion of the city’s “Green Purchasing” (GP) policies?</li> <li>● What is the city’s current ‘green procurement’ policies.</li> <li>● Are there examples of EPR policies in CA or other US Cities?</li> </ul>	<p>Information about single use carry-out bag ban:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.calrecycle.ca.gov/plastics/carryoutbags/faqs">https://www.calrecycle.ca.gov/plastics/carryoutbags/faqs</a></li> </ul> <p>A list of California cities with specific plastic bag bans:</p>

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	<ul style="list-style-type: none"> <li>Is the city's procurement department/system ready to take on Extended Producer Responsibility requirements?</li> </ul>	<ul style="list-style-type: none"> <li><a href="https://www.calrecycle.ca.gov/Plastics/CarryOutBags/Ordinances/">https://www.calrecycle.ca.gov/Plastics/CarryOutBags/Ordinances/</a></li> </ul> <p>CalRecycle is a great source of example green procurement policies:</p> <ul style="list-style-type: none"> <li><a href="https://www.calrecycle.ca.gov/buyrecycled/policies">https://www.calrecycle.ca.gov/buyrecycled/policies</a></li> </ul> <p>Useful information and resources on EPR are presented at the CalRecycle website here:</p> <ul style="list-style-type: none"> <li><a href="https://www.calrecycle.ca.gov/epr">https://www.calrecycle.ca.gov/epr</a></li> <li>And here: <a href="https://www.calrecycle.ca.gov/EPR/PolicyLaw/">https://www.calrecycle.ca.gov/EPR/PolicyLaw/</a></li> </ul>
<p>"For many years, the city has sponsored tree planting programs...</p> <p>Additionally, the city operates a Heritage Tree Program that has the potential to reduce GHG emissions, data limitations restrict the city's ability to quantify their reduction capacity. Furthermore, to the extent that these policies and programs were in place in 2008, their GHG reduction potential is accounted for within the baseline emissions inventory.</p>	<p>ICLEI's guidance for urban forest carbon sequestration may offer a two-part program implementation pathway: 1) trees reduce urban heat island effects and increase property values (among other noteworthy benefits). 2) As part of a mitigation/adaptation framework, trees absorb and sequester carbon. The city could implement an urban forestry program to do mitigation (reduce the need for AC), adaptation (reduces urban heat islands, and restoration (sequestering carbon to offset the city's other emissions).</p> <p>Consider both the city urban forestry and a city 'sister forest' program, where residents can 'invest' in the protection and management of other forested lands.</p>	<p>The following resources are recommended to assist the city in evaluating urban forestry as both a mitigation and adaptation strategy.</p> <ul style="list-style-type: none"> <li><a href="http://icleiusa.org/communities-now-better-equipped-to-include-trees-in-climate-action-planning/">http://icleiusa.org/communities-now-better-equipped-to-include-trees-in-climate-action-planning/</a></li> <li><a href="https://www.climateactionreserve.org/how/protocols/urban-forest/">https://www.climateactionreserve.org/how/protocols/urban-forest/</a></li> <li><a href="https://www.climateactionreserve.org/how/protocols/forest/">https://www.climateactionreserve.org/how/protocols/forest/</a></li> <li><a href="https://www.fs.fed.us/managing-land/urban-forests/ucf">https://www.fs.fed.us/managing-land/urban-forests/ucf</a></li> </ul>
<p>"...the City has a hybrid/alternative vehicle procurement policy that will</p>	<p>Update this with a report on where the city is in this process.</p> <p>Include electrification of diesel vehicles in policy update.</p>	<p>The following resources will provide helpful technical information, vehicle types, group</p>

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<p>replace all remaining gasoline powered vehicles at the end of their life.”</p>	<p>Does the city encourage special districts within the city to follow suit? Is there an opportunity to parallel (and leverage) the County’s Sustainability Plan with regard to vehicle/fleet electrification plans? Does the city need a specific Fleet electrification plan? (as that process can be a complicated one)</p>	<p>purchasing programs, and benchmarking opportunities:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.electrificationcoalition.org/programs/electric-vehicle-fleets/">https://www.electrificationcoalition.org/programs/electric-vehicle-fleets/</a></li> <li>● <a href="https://www.govtech.com/fs/transportation/Scores-of-Cities-Counties-Commit-to-Electric-Fleet-Future.html">https://www.govtech.com/fs/transportation/Scores-of-Cities-Counties-Commit-to-Electric-Fleet-Future.html</a></li> <li>● <a href="https://driveevfleets.org/">https://driveevfleets.org/</a></li> <li>● <a href="https://www.green.ca.gov/fleet/drivegreen">https://www.green.ca.gov/fleet/drivegreen</a></li> <li>● <a href="https://mygreencar.com/fleet/">https://mygreencar.com/fleet/</a></li> </ul>
<p>Individual Actions - To achieve [the city]’s GHG reduction target, every resident and business needs to participate.</p>	<p>The impact of individual actions on reducing ghg emissions is being hotly debated. However, there are other benefits that come with individual action; improved health, civic engagement, improved air quality, and the powerful motivator of individual agency.</p>	<p>Here is one resource for encouraging and measuring the impacts of Individual Actions:</p> <ul style="list-style-type: none"> <li>● <a href="https://www.communityclimate.org/">https://www.communityclimate.org/</a></li> </ul>
<p>Assuming that the same type of current emissions generating practices continue to occur within [the city], community-wide GHG emissions are anticipated to increase by 11% in 2020 over 2008 levels, and by 22% in 2035 over 2008 levels. Sources of GHG emissions for 2008, 2020, and 2035 are the following, in descending order:</p> <ul style="list-style-type: none"> <li>● Transportation sources (~62%)</li> <li>● Commercial and industrial energy use (~20%)</li> <li>● Residential energy use (~12%)</li> </ul>	<p>How is the city progress toward these goals? The next CAP should provide an assessment of what the city’s efforts have been, their results, and a new baseline.</p> <p>Taking into consideration the State-wide inventory (see Appendix 1: <i>Emissions Come from a Wide Variety of Sources</i>) and the parallel to local emission inventories, a focus on reducing emissions from transportation and the built environment will likely lead to the biggest reductions in ghg emissions, and other pollutants contributing to local adverse air quality impacts. The following are policy and program directions the city may wish to consider:</p> <ul style="list-style-type: none"> <li>● Retrofit ALL buildings so that electrical panels and service drops are modernized and ‘all-electric ready’</li> </ul>	<p>The following resources apply to Building Decarbonization:</p> <ul style="list-style-type: none"> <li>● <a href="http://www.buildingdecarb.org/">http://www.buildingdecarb.org/</a></li> <li>● <a href="https://www.cpuc.ca.gov/BuildingDecarb/">https://www.cpuc.ca.gov/BuildingDecarb/</a></li> <li>● <a href="https://www.greentechmedia.com/articles/read/california-cpuc-approves-landmark-ev-charging-proposals#gs.40f7ai">https://www.greentechmedia.com/articles/read/california-cpuc-approves-landmark-ev-charging-proposals#gs.40f7ai</a></li> </ul> <p>The following local resource may also help the city prioritize certain actions in its community-built environment:</p> <ul style="list-style-type: none"> <li>● <a href="https://energyatlas.ucla.edu/en/">https://energyatlas.ucla.edu/en/</a></li> </ul>

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<ul style="list-style-type: none"> <li>● Wastewater treatment (~4%)</li> <li>● Solid waste (~1%)</li> <li>● Water use (~1%)</li> </ul>	<ul style="list-style-type: none"> <li>● Require all new buildings to be constructed as “all-electric ready” - or - to institute a ban on natural gas service to any new commercial or residential construction.</li> <li>● Integrate CAP with Transportation and Housing elements of GP             <ul style="list-style-type: none"> <li>○ work towards 100% transit accessibility for all workplaces and residences (e.g. less than ¼ mile walk for anyone, anywhere, to access a transit stop)</li> <li>○ Integrate bike share programs (like Jump or similar) with transit stops and hubs</li> <li>○ Install separated bike lanes / create dedicated ‘bikeways’, in coordination with neighboring jurisdictions (so they connect)</li> </ul> </li> </ul>	
<p>Municipal Emissions - Emissions from the municipal vehicle fleet, solid waste, and water/wastewater are not reported, as data for these sectors were not available at the time of this writing.</p>	<p>How has data collection changed in the intervening years? Are you able to access fuel purchase information? Odometer readings? Even better, have any departments implemented fleet telemetry? If they have, this can serve two functions – to assess opportunities for fleet efficiencies, AND to support your plan for full fleet electrification (where do you need what type of charger, how many of what type of vehicle do you need).</p> <p>It is recommended that the city establish a baseline for this segment of the city’s emissions inventory to inform the creation of the next CAP and for tracking progress towards to-be-established goals.</p>	<p>These resources may be helpful when considering ways to improve City fleet efficiency, and in planning fleet electrification.</p> <ul style="list-style-type: none"> <li>● <a href="https://www.government-fleet.com/333532/in-these-cities-fleet-vehicles-are-roaming-data-centers">https://www.government-fleet.com/333532/in-these-cities-fleet-vehicles-are-roaming-data-centers</a></li> <li>● <a href="https://www.govtech.com/biz/How-Data-Helps-Cities-Achieve-Vision-Zero-Safety-Goals-.html">https://www.govtech.com/biz/How-Data-Helps-Cities-Achieve-Vision-Zero-Safety-Goals-.html</a></li> </ul>
<p>Sustainable manager and new City Operations policies.</p>	<p>The city has an outstanding Sustainability Manager.</p>	<ul style="list-style-type: none"> <li>● <a href="https://healthybuildings.com/services/commissioning/retro-commissioning-rcx-or-existing-building-commissioning/">https://healthybuildings.com/services/commissioning/retro-commissioning-rcx-or-existing-building-commissioning/</a></li> </ul>



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	<p>Was there a list of ‘new City operations policies’ that was envisioned? If so, a cross-check of progress against that list is recommended.</p> <p>For Operations Policies, these topics may also be worth your consideration:</p> <ul style="list-style-type: none"> <li>● Building commissioning/ retro- commissioning schedules or cycles?</li> <li>● Regular energy efficiency audits and upgrades, or assessments to determine optimal updates?</li> <li>● Real estate investment guidelines to support purchase and maintenance of buildings and RE holdings in a manner that minimizes energy use and ghg emissions?</li> <li>● Fleet management policies and programs such as on-board telemetry of city fleet vehicles (to optimize utilization and gather data helpful for planning the transition to full-electric fleets).</li> </ul> <p>City Ops is a potentially fruitful area of benchmarking with other local governments.</p> <p>It is also suggested that City Admin policies be added to your list. City admin policies may include such things as:</p> <ul style="list-style-type: none"> <li>● Economic Development incentives for certain kinds of (low carbon) businesses, energy efficient practices, workforce training, etc.</li> <li>● Purchasing Policies - There are some good examples of streamlined procurement of ‘sustainable’ goods and services, inclusion of extended producer responsibility in the procurement of certain products (PV systems, fuel cells, large equipment, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>● <a href="https://aceee.org/local-policy/toolkit/savings-strategies-buildings">https://aceee.org/local-policy/toolkit/savings-strategies-buildings</a></li> <li>● <a href="https://www.newyorker.com/news/news-desk/the-false-choice-between-economic-growth-and-combatting-climate-change">https://www.newyorker.com/news/news-desk/the-false-choice-between-economic-growth-and-combatting-climate-change</a></li> </ul> <p>Example local government telework policy:</p> <ul style="list-style-type: none"> <li>● <a href="https://sfdhr.org/telecommute">https://sfdhr.org/telecommute</a></li> </ul> <p>Information resources supporting the majority of the remaining suggestions here are included elsewhere in this document.</p>
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	<ul style="list-style-type: none"> <li>● Establishing a goal of a bond / investment rating above a certain benchmark based on the city’s climate action and adaptation plans, policies and accomplishments, which may require working with the city’s municipal insurance provider and bond counsel.</li> <li>● An investment/ divestment policy to guide the city in investing their money in alignment with their sustainability and climate policy priorities.</li> <li>● HR policies that encourage: telework/ remote work (to reduce commuting), public transportation use, etc.</li> <li>● City staff engagement programs, which might include such things as extending ‘decarbonization’ benefits to employees - maybe subsidizing clean vehicle lease or purchase, heat-pump water heater swap-ins, induction stove group purchases.</li> </ul>	
<p>Municipal energy use. Increase renewable/carbon free.</p>	<p>I think we can check that box.</p>	<p>With the launch of the Clean Power Alliance CCA, a significant reduction in the carbon content of purchased and provided electricity is possible. It is recommended that the city and the other constituent jurisdictions of the CPA analyze, determine, and publish the annual and projected emissions factors for delivered electricity (and how it compares to SCE’s emissions factors).</p>
<p>Municipal energy use. Increase Energy Efficiency.</p>	<p>Has the city done a City-wide building energy audit?  What is the benchmark for this objective? If this has not been done, then an important goal might be to inventory all City buildings, create a schedule and prioritization and get every one of them EE audited within a specified timeframe.</p>	<p>There are a number of organizations providing energy audit services, either in conjunction with other retrofit work or as a stand-alone service.</p>

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<p>Municipal Water Use: Interior and Landscape water use reductions.</p> <p>20% by 2020 40% by 2035</p> <p>20% by 2020 50% by 2035</p>	<p>Moving beyond Municipal water use to community-wide: ~ what was the result of the city’s conservation efforts during the drought? Do you have data to correlate water saved with commensurate energy saved? Can these data lead you to additional policy initiatives?</p> <p>What about working with CPA and LADWP (or whoever is the city’s water purveyor) to create a collaborative effort on these topics? The water-energy nexus could be a fruitful area for exploration and collaboration!</p>	<p>Are there opportunities for significant municipal AND community/resident landscape retrofits?</p> <ul style="list-style-type: none"> <li>● “Lawn Arrangers” (work with landscape contractors, offer rebates and incentives to replace lawns with xeriscaping and native plants.</li> <li>● Rainwater capture for landscape irrigation</li> <li>● Storm water retention and percolation (“rain gardens”) to improve groundwater recharge.</li> </ul>
<p>Transportation:</p> <p>Percentage of employees who commute to work using a mode other than a single-occupancy vehicle. 50% by 2020</p>	<p>Measure of community non-single occupancy ICE vehicle use?</p>	<p>Can telecommute solutions be promoted community-wide? more/better internet? community Wi-Fi? fiber optic to all neighborhoods?</p>
<p>“... the majority of the city’s commercial buildings and homes were built before California’s Title 24 energy efficiency standards took effect. Retrofitting commercial buildings and homes to meet current energy efficiency standards offers great potential to achieve emission reductions, especially compared with other strategies within the CAP.”</p>	<p>Retrofitting existing buildings is challenging. This is likely to be an area of effort that will evolve over time - taking different approaches and adapting messaging and methods over time.</p> <p>Some ideas to consider:</p> <ul style="list-style-type: none"> <li>● ‘Upgrade on sale’ ordinances</li> <li>● Interest buy-downs on PACE financing</li> <li>● Specialized or targeted incentives for particularly high-return retrofit actions</li> <li>● Education - reaching home-owners through their kids - create elementary and high school curricula about the “city-way”</li> </ul>	<p>It may be worth considering a periodic review of the city catalog of big-bang-for-the-buck actions in residential retrofits (yes, the CPUC and SCE/SoCalREN/CPA will have this list of measures. The city may want to pick a set that is most relevant for city residents and businesses, and focus on those in an ‘all out- all in’ kind of campaign for a time, then evaluate and move to the next set.</p>

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	<ul style="list-style-type: none"> <li>● Create a Climate Kit for the city public libraries that can be checked out - that has tools, basic retrofit gear, instructions and tips and adaptation/ resiliency planning info (and gets replenished with new stuff when returned)</li> </ul>	
“Reduce energy use”	<p>This still an appropriate paradigm as we seek to electrify transportation and all energy use. The increased demand may put a strain on the grid, particularly locally. Working with SCE to ensure local electrification initiatives are paired well with energy efficiency and energy reduction efforts will provide long-term resilience benefits.</p> <p>Energy efficiency certainly is appropriate, but would ‘carbon-intensity’ or other life-cycle cost/foot-print metrics of energy generation and use be more appropriate? What is the best message point here?</p>	
Regarding waste: Waste-related GHG emissions result from product consumption and disposal, and from pre-consumer commercial and industrial processes. In this city, about 1% of GHG emissions are associated with solid waste generation and disposal in landfills.	<p>This may be open to review, as we understand more about the impacts of plastics.</p> <p>Organic waste - from food waste as well as landscape maintenance waste - is a great resource! This material can be turned into compost, or can be ‘digested’ to create local ‘renewable’ natural gas. Is there any regional effort to examine this resource potential?</p>	
Extended Producer Responsibility advocacy... what is the status?	See above	Advocacy on this, and other issues, can be grouped under a common strategic element of “advocacy/policy engagement”.

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<p>“Encourage the use of reusable and biodegradable materials in retail and commercial establishments”</p>	<p>What does “encourage” mean, and how effective has this been? Would The city be open to considering ordinances with specific goals or requirements?</p> <p>This area has matured in the last several years. Recycling is problematic, but also presents opportunities for re-localizing recycling industries. Is there an opportunity for a regional effort to compost organic materials? Is there an opportunity to encourage Bring Your Own via a collaboration with local restaurant associations?</p>	<p>The State’s Green Business Program is probably a good place to start.</p> <p><a href="https://greenbusinessca.org/">https://greenbusinessca.org/</a></p> <p>The references provided for specific materials bans may provide some guidance here as well.</p>
<p>New Opportunities/New Ideas</p>	<p><u>Financing for Municipal actions:</u></p> <p>Revolving loan fund</p> <p>Green Bonds</p> <p style="text-align: center;">***</p> <p><u>Financing for Citizen actions:</u></p> <p>Pay as you Save programs</p> <p>On-bill financing</p> <p>PACE financing (ex, HERO program)</p> <p>* consider the possibility of buying down PACE financing interest rates, especially for lower income residents.</p>	<p>RLFs -</p> <ul style="list-style-type: none"> <li>• <a href="https://aceee.org/sector/state-policy/toolkit/revolving-loan-funds">https://aceee.org/sector/state-policy/toolkit/revolving-loan-funds</a></li> <li>• <a href="https://www.energy.gov/eere/slsc/revolving-loan-funds">https://www.energy.gov/eere/slsc/revolving-loan-funds</a></li> <li>• <a href="https://betterbuildingsinitiative.energy.gov/toolkits/green-revolving-funds">https://betterbuildingsinitiative.energy.gov/toolkits/green-revolving-funds</a></li> </ul> <p>Green Bonds -</p> <ul style="list-style-type: none"> <li>• <a href="https://www.climatebonds.net/market/explaining-green-bonds">https://www.climatebonds.net/market/explaining-green-bonds</a></li> <li>• <a href="https://www.treasurer.ca.gov/caeatfa/pace/index.asp">https://www.treasurer.ca.gov/caeatfa/pace/index.asp</a></li> </ul>
	<p>Complete integration of mitigation and adaptation planning into the city’s General Plan</p>	<ul style="list-style-type: none"> <li>• <a href="https://www.adaptationclearinghouse.org/resources/california-general-plan-guidelines.html">https://www.adaptationclearinghouse.org/resources/california-general-plan-guidelines.html</a></li> </ul>

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		<ul style="list-style-type: none"> <li>• <a href="http://427mt.com/2017/11/27/local-adaptation-planning-process-guide/">http://427mt.com/2017/11/27/local-adaptation-planning-process-guide/</a></li> </ul>
	Integrate Climate Action Planning and Climate Adaptation into the city's Capital Improvements Plan (CIP)	<ul style="list-style-type: none"> <li>• <a href="https://planningforhazards.com/capital-improvement-plan">https://planningforhazards.com/capital-improvement-plan</a></li> <li>• <a href="https://www.climatelinks.org/resources/incorporating-climate-change-adaptation-infrastructure-planning-and-design-overarching">https://www.climatelinks.org/resources/incorporating-climate-change-adaptation-infrastructure-planning-and-design-overarching</a></li> <li>• <a href="https://toolkit.climate.gov/tools?f%5B0%5D=field_workflow_step%3A57">https://toolkit.climate.gov/tools?f%5B0%5D=field_workflow_step%3A57</a></li> </ul>
	Facilitate/support leak detection and repair in natural gas distribution system(s).	Maintenance of the State's natural gas transmission and distribution systems (up to and including individual gas meters) is the responsibility of the investor-owned and municipal utilities. However, these systems are increasingly viewed as a concerning potential source of fugitive emissions. Through their franchise agreements and long-term relationships with utilities, cities have an opportunity to encourage greater attention to this emissions (and safety) issue.
	<p>The city's Investment/Divestment Policies.</p> <p>Many organizations are reviewing their investment policies - and removing their investments from oil and gas industries. If this is appropriate for the city, there are several examples.</p> <p>Conversely, there are investment strategies that 'filter' investment opportunities meeting stringent municipal</p>	<ul style="list-style-type: none"> <li>• <a href="https://gofossilfree.org/divestment/what-is-fossil-fuel-divestment/">https://gofossilfree.org/divestment/what-is-fossil-fuel-divestment/</a></li> <li>• <a href="https://gofossilfree.org/divestment/commitments/">https://gofossilfree.org/divestment/commitments/</a></li> <li>• <a href="https://www.divestinvest.org/">https://www.divestinvest.org/</a></li> </ul>

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	investment standards *and* environmentally/socially responsible standards of investment.	
	Workforce Development may be an area the city can encourage community, State or its own investments, particularly through the lens of economic development.	<p>Ensuring the city has the right workforce for the future, the following articles and resources may be informative:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.brookings.edu/research/advancing-inclusion-through-clean-energy-jobs/">https://www.brookings.edu/research/advancing-inclusion-through-clean-energy-jobs/</a></li> <li>• <a href="https://www.edf.org/energy/clean-energy-jobs">https://www.edf.org/energy/clean-energy-jobs</a></li> <li>• <a href="https://www.bluegreenalliance.org/work-issue/climate-change/">https://www.bluegreenalliance.org/work-issue/climate-change/</a></li> </ul>
	<p>Coordination with State and regional agencies:</p> <ul style="list-style-type: none"> <li>• <a href="#">Southern California Air Quality Management District</a> (SCAQMD)</li> <li>• <a href="#">Clean Power Alliance</a> (CPA)</li> <li>• <a href="#">Los Angeles Department of Water and Power</a> (LADWP)</li> <li>• <a href="#">Caltrans</a></li> <li>• <a href="#">Los Angeles County Metropolitan Transportation Authority</a> (LA Metro)</li> <li>• <a href="#">California Air Resources Board</a> (CARB)</li> <li>• <a href="#">California State Water Resources Control Board</a> (SWRCB)</li> <li>• <a href="#">CalRecycle</a></li> </ul>	<p>These agencies (and others) may align with and have aligned interests with the city's updated CAP. For example, SCAQMD and CARB are both aligned with transportation electrification. CPA and SCE are also strong allies on this issue. Coordinated efforts (messaging, outreach, leveraged funding, etc.) will ensure more effective action.</p>
	<p>Evaluation of un-and under-utilized lands and properties for potential local renewable energy generation</p> <ul style="list-style-type: none"> <li>• Brownfields</li> <li>• Rights of way</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="https://caled.org/brownfields-faq/">https://caled.org/brownfields-faq/</a></li> </ul>

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	Policy and regulatory engagement	The city is already a member of the Local Government Sustainable Energy Coalition.  Additional policy and regulatory engagement opportunities may be identified and prioritized through the CAP update process.
	Select Indicators of Economic and Social performance (beyond GDP) to measure the city's progress	Consider the example of the Genuine Progress Indicators. Using metrics such as these may help the city value and measure, the things it prioritizes (public health, civic engagement, etc.)  <ul style="list-style-type: none"> <li>• <a href="https://sustainable-economy.org/genuine-progress/">https://sustainable-economy.org/genuine-progress/</a></li> </ul>
<b>Climate Change Adaptation/Resilience Planning</b>		
	The California 4th Climate Assessment. In particular, the report for the Los Angeles region, detailing projections of anticipated climate impacts.	Integrating Climate Change Adaptation into the city CAP, the city may wish to consider the following references: <ul style="list-style-type: none"> <li>• <a href="http://www.climateassessment.ca.gov/regions/">http://www.climateassessment.ca.gov/regions/</a></li> <li>• <a href="https://toolkit.climate.gov/tools?f%5B0%5D=field_workflow_step%3A57">https://toolkit.climate.gov/tools?f%5B0%5D=field_workflow_step%3A57</a></li> </ul>
	Any SCE plans for Public Safety Power Shut-offs, the circumstances in which those might occur, and community-supportive responses that the city (alone or in collaboration with other organizations) can take.	

### Additional Resources and References:



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US EPA - [https://19january2017snapshot.epa.gov/statelocalclimate/local-climate-action-framework-step-step-implementation-guide\\_.html](https://19january2017snapshot.epa.gov/statelocalclimate/local-climate-action-framework-step-step-implementation-guide_.html)

Although these resources pre-date the current federal administration, there may be some practical tools and recommendations on this website. In particular, the examples provided by the Climate Showcase Communities may be illustrative: [https://19january2017snapshot.epa.gov/statelocalclimate/climate-showcase-communities-program\\_.html](https://19january2017snapshot.epa.gov/statelocalclimate/climate-showcase-communities-program_.html)

### California Resources –

#### California Air Resources Board:

The Cool California website has several resources - <https://coolcalifornia.arb.ca.gov/> including a “Funding Wizard” and the “Climate Action Portal Map”, where there are lists of CAP strategies for local governments to consider: <https://coolcalifornia.arb.ca.gov/local-government>

Institute for Local Government - <https://www.ca-ilg.org/climate-action-plans> ILG provides resources for both climate mitigation planning and adaptation - <https://www.ca-ilg.org/climate-adaptation-and-resilience>. The ILG also manages the Beacon program, and presents the annual Beacon Award - <https://www.ca-ilg.org/beacon-program> recognizing local governments with a holistic approach to climate action.

ICLEI: Local Governments for Sustainability – The Bonn Headquartered organization’s US branch provides many resources for local governments to conduct rigorous climate action planning. Their suite of services and tools includes “ClearPath”, an emissions inventory tool, various other protocols, and educational publications, webinars and events.

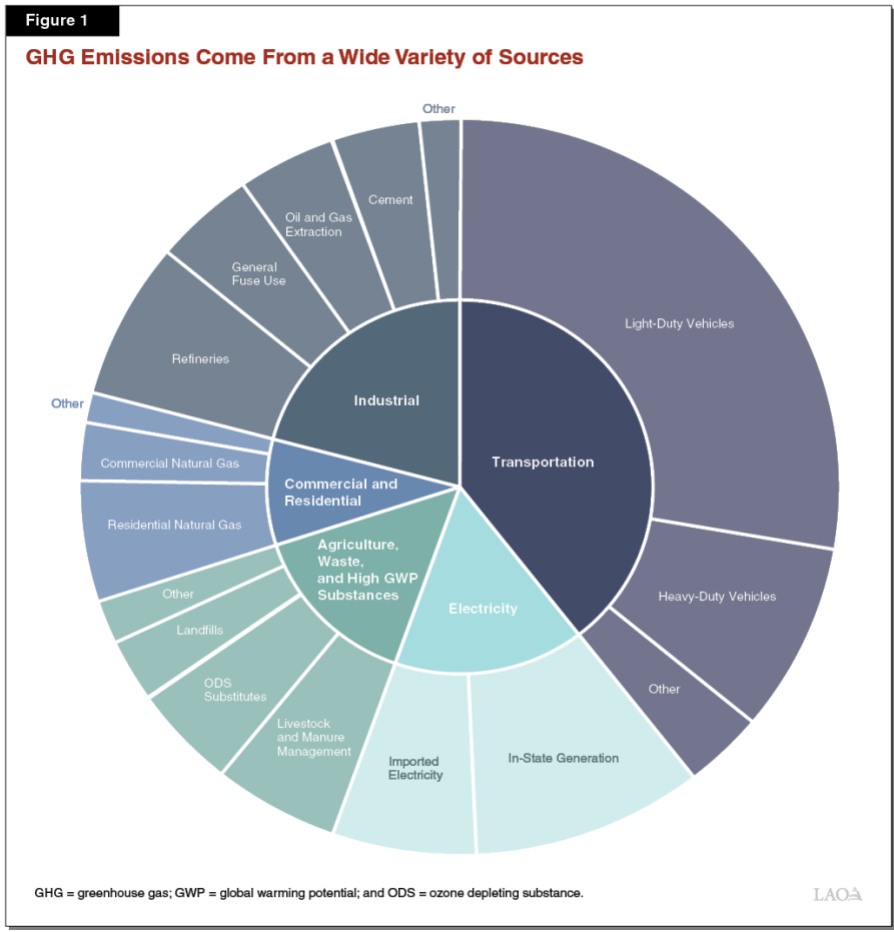
### International Examples and Resources –

The C40 Cities and Cities100 programs - <https://www.c40.org/cities> provide examples with case studies and outcomes which California cities might wish to emulate. The C40 website also provides research documents on various emissions reduction programs, which could be cited when framing emissions reductions plan elements.

The Climate Group – This non-profit organization has a diverse network of members and projects, which may be a source of inspiration. <https://www.theclimategroup.org/project/policy-action>

### Appendix 1: *Emissions Come from a Wide Variety of Sources*

# Climate Action Plan (CAP) Review Matrix



<https://lao.ca.gov/Publications/Report/3911>