

Mayors' Commission on Climate Change

Achieving Carbon Zero in Sacramento and West Sacramento by 2045



Prepared by Local Government Commission

Draft Report | April 2020

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LETTER FROM THE MAYORS

To be included in the final report.

LETTER FROM THE CHAIR

To be included in the final report.

DRAFT

EXECUTIVE SUMMARY

Recognizing the urgent need to act on climate change, Sacramento Mayor Darrell Steinberg and West Sacramento Mayor Christopher Cabaldon launched the Mayors' Commission on Climate Change in November 2018 to develop recommendations to achieve carbon zero by 2045 in the cities of Sacramento and West Sacramento.

The need for immediate climate action is exemplified in the risks already impacting our public health and safety, life-sustaining ecosystems and the region's economy- including rising temperatures and more extreme heat waves, drier landscapes and more intense droughts, increased risk of floods, and more frequent and larger wildfires.

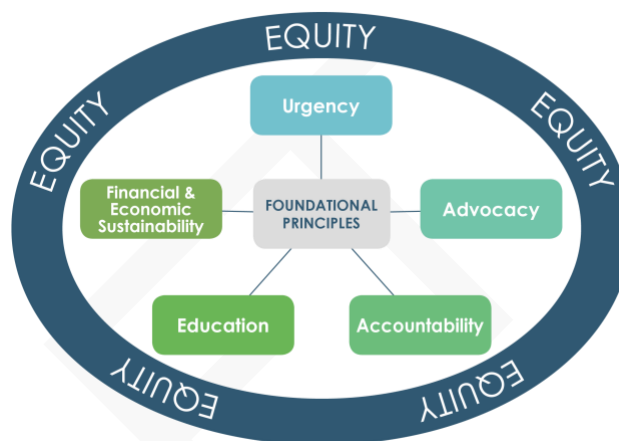
The work of the Commission, which consists of 19 local and regional leaders representing key public agencies, nonprofit organizations, businesses and academic institutions, was supported by a set of Technical Advisory Committees (TACs) and input from community members, youth and local businesses. Three sector-based TACs (focused on the Built Environment, Mobility, and Community Health and Resiliency) were convened to address the cities' largest sources of emissions – transportation, buildings and waste – and identify strategies that promote public health and climate resilience.

Two additional TACs on Equity and on Funding and Finance were convened to provide additional guidance on social-equity objectives and advancing implementation of the carbon-reduction strategies identified.

Equity was a key priority for the Commission and was considered across every aspect of the initiative. Given the disproportionate climate impacts upon marginalized communities, the Commission recommended a set of equity measures to address historical and current disparities, which will underpin and guide the implementation of all sector-based strategies. These strategies include operationalizing equity throughout agency decision-making and investment processes, authentically and inclusively involving marginalized communities, and building capacity through cultural brokers and community-based organizations.

Additionally, the Commission identified a set of foundational principles that cut across individual business and community sectors to guide the implementation of carbon-zero strategies including: urgency, advocacy, accountability, education, and financial and economic sustainability.

Through the lens of equity and these foundational principles, the Commission recommends the following sector-based strategies to achieve carbon zero by 2045 while simultaneously advancing social equity and economic prosperity. By addressing the largest contributors of greenhouse gas emissions we are confident that our strategies will set us on a pathway to achieve the cities' ambitious goal. Our communities will be stronger and more prosperous if we take bold action now to dramatically reduce our carbon emissions and increase community resilience to climate-change impacts.



Built Environment



Sustainable Land Use

Support infill growth consistent with the regional Sustainable Communities Strategy to ensure:

- 90% of the cities' growth is in the established and center/corridor communities and is 90% small-lot and attached homes by 2040.
- Project level VMT is 15% below (or 85% of) the regional average.



Electrification of New Construction

Mandate all-electric construction to eliminate fossil-fuel use in new buildings by 2023.

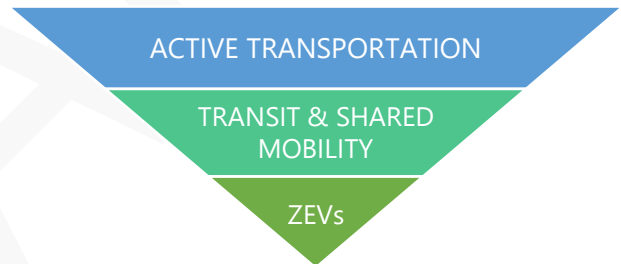


Electrification of Existing Buildings

Transition 25% of existing residential and small commercial buildings to all electric by 2030

Mobility

Investments to reduce emissions stemming from the Mobility sector, the largest source of emissions for both Sacramento and West Sacramento, should follow a hierarchy that first prioritizes active transportation, followed by transit and shared mobility, and finally ZEVs. Following this hierarchy will enable the cities to achieve equitable outcomes and deliver multiple benefits to communities.



Active Transportation

Expand and enhance accessibility to low-stress, connected infrastructure for walking and rolling, prioritizing improvements that address specific community and neighborhood needs so that:

- 30% of all trips are by active transportation by 2030.
- 40% of all trips are by active transportation by 2045.



Transit & Shared Mobility

Expand and improve transit and shared mobility services to be more accessible, affordable, timely and attractive than single-occupancy-vehicle use so that:

- 30% of all trips are by transit and pooled shared mobility by 2030.
- 50% of all trips are by transit and pooled shared mobility by 2045.



Zero-Emission Vehicles

Develop a comprehensive package of incentives, disincentives and policies to encourage the adoption of zero-emission vehicles (ZEVs) so that:

- 70% of new vehicle registrations will be for ZEVs by 2030.
- All public, private and shared fleets are fully electrified by 2045.

Community Health and Resiliency



Urban Greening and Forestry

Expand green infrastructure to ensure that all neighborhoods, starting with historically marginalized communities and tree-deficient neighborhoods, have:

- Access to green space within a quarter-mile by 2030.
- A baseline canopy of 25% by 2030, and 35% by 2045.



Sustainable Food Systems

Increase food security and access to healthy, affordable food for all communities, while supporting a regenerative food system by:

- Sourcing 25% of food locally within a 200-mile radius by 2030, and 40% by 2045.
- Reducing 50% of aggregate food waste by 2025, and 75% by 2030.



Community Climate Resilience

Identify climate vulnerabilities and adaptation strategies as part of the climate action plan or general plan updates by 2022. Develop and implement preparedness measures, with a priority focus initially on increasing the resilience of communities most vulnerable to climate-change impacts by investing in existing community assets and networks to increase community adaptive capacity.

The Built Environment, Mobility, and Community Health and Resiliency strategies are interconnected and mutually reinforcing and should be implemented holistically — for example, sustainable land use patterns will be critical to decreasing car travel and increasing transit and active transportation.

To build momentum and community engagement around these strategies, it is critical for the cities to pursue pilots and initiatives that demonstrate tangible results. As such, the Commission's recommendations include a set of near-term projects that can be started in the first year of implementation.

Transformative action is needed to decarbonize the economy and safeguard communities from the worsening impacts of climate change. By embarking on a path toward carbon zero by 2045, the cities of Sacramento and West Sacramento are positioning the region as a national and international model for a climate-smart future.

Turning this plan into action rests will require residents, businesses, City government, and other institutions to urgently rise to the challenge of advancing significant changes – changes in our infrastructure, technological advances, ramped up green workforce development, and change in the decisions we make every day as members of the community. Everyone must play a role to ensure a more equitable, prosperous and resilient future for all residents.

COMMISSIONERS



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- **Flojaune Cofer** | Senior Director of Policy, Public Health Advocates
- **Julia Burrows** | Senior Policy Advisor to Mayor Steinberg, City of Sacramento



**Local
Government
Commission**

Local Government Commission administered this initiative in partnership with Sacramento and West Sacramento city staff and with contributions from hundreds of experts and stakeholders. **Kate Meis**, Executive Director, oversaw the overall initiative and provided strategic guidance and **Julia Kim**, Climate Change and Energy Program Director, served as the project manager.

SPONSORS

This initiative was funded through sponsorships from the City of Sacramento, Resources Legacy Fund, Ford Foundation, Kaiser Permanente, NextGen Policy, Sacramento Metropolitan Air Quality Management District, Sacramento Municipal Utility District, Sacramento Regional Transit, Parkwest Casinos, and Western Dental & Orthodontics. Without the generous contributions from these sponsors, the Mayors' Commission on Climate Change initiative would not have been possible.



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ADDRESSING CLIMATE CHANGE IN THE ERA OF COVID-19

The cities of Sacramento and West Sacramento, and local leaders across the world, are struggling to adapt to the economic and social constraints of the COVID-19 pandemic. While the immediate focus is first and foremost on protecting public health, safety and well-being there will be lessons learned and opportunities for growth and reinvention that emerge.

Difficult situations and disruptions can provide a rare opportunity to gain insights and develop new approaches that can improve our lives long after the pandemic.

In the aftermath of the 2008 recession, fossil fuel-heavy and otherwise polluting industries received a major share of the bailout money. Today, however, practical options for green investments are plentiful. Renewable energy is cheaper than coal in most of the world, and increasingly competitive with natural gas. Now is the time to invest stimulus dollars into projects that address public health, climate and social-equity needs, including infill affordable housing, critical transit projects, bicycle and pedestrian infrastructure, broadband deployment and sustained telecommuting and telemedicine programs, zero-emission vehicle fleet conversion and infrastructure deployment, urban greening (especially in marginalized communities) and access to healthy, local food.



American River Bike Trail in Sacramento

We can't boost the economy in a way that would continue to lead us into another health crisis in terms of air pollution and climate change— it's imperative that we consider opportunities to create more sustainable, resilient jobs and invest in helping industries become more efficient and less polluting.

While stimulus packages and economic recovery efforts are being developed at every level of government it's imperative that we consider opportunities to create more sustainable, resilient jobs and invest in helping industries become more efficient and less polluting.

Given the long-standing economic impacts we're likely to face as a result of the COVID-19 pandemic, we must be much more strategic and creative with our investments and our core principles, focusing on high-priority projects that achieve multiple economic, social and environmental benefits. The cities should be looking at their budgets, capital-improvement plans, transportation and other expenditure plans through the lens of climate and equity to optimize the return on every dollar spent.

Challenging times are uniquely opportune for assessing what's most critical—in times of distress priorities are clarified, and barriers are removed.

These times also show us the extent to which people are willing and capable of making significant and dramatic changes in the face of a global threat. People have significantly reduced their carbon footprint – in ways that would have been unimaginable just weeks ago. These reductions (however long they last) have come at a significant cost for businesses and millions of workers. While we work to minimize the immediate hurt (especially for our most vulnerable residents and communities), there are perhaps, simultaneously, lessons we can learn from this difficult period to sustain some of the new habits people are developing without the social and economic burden.

As leaders and stakeholders, our first responsibility is to ensure the health, safety and well-being of people and businesses within our communities. Already, many of us are doing that in creative new ways that wouldn't have been possible before this disruption. As we forge through this time together, we have the opportunity to learn from each other and extend that creativity to ensure our communities' long-term resilience and prosperity.

INTRODUCTION

Sacramento and West Sacramento communities are already experiencing the harmful impacts of climate change, which are projected to worsen over time.

According to California's Fourth Climate Change Assessment Sacramento Valley Regional Report, climate change is already affecting agriculture, infrastructure, transportation, energy, recreation, industry, households, human health, and natural ecosystems in the Sacramento Valley. Extreme weather and natural hazards will continue to affect these and other sectors in the 21st century. Key climate-change risks facing the Sacramento region include the following.

- More frequent heat-related stress, illness, and human mortality due to increases in number of extremely hot days (prolonged heat waves).
- More disease-causing pathogens, including West Nile virus and Valley Fever.
- More frequent severe storms and floods and increased stress on levee systems.
- Potential disruptions to the housing market in response to unmitigated flooding and concomitant economic impacts that disproportionately affect particular sociodemographic groups.
- Increased wildfire risks and impacts, especially for rural communities in hilly and forested terrain.
- Reduced operating efficiency and generation capacity of thermo-electric power plants due to increasing air and water temperatures.
- Reduced or disrupted hydropower generation from greater evaporative losses, altered runoff timing, decreased snowpack and increased storm intensity.
- Decreased efficiency of electric transmission and distribution systems from higher temperatures.
- Accelerated roadway deformation and track buckling resulting from extreme heat, and increased expansion and contraction at critical bridge joints resulting from temperature fluctuations.
- Traffic and signal disruptions from extreme weather.
- Reductions in groundwater in response to drought and increased water demands.
- Ecosystem disruptions, alterations to habitats, and species composition changes including increased extinction risk for most native fish species and increased threats, displacement and/or local extinction due to invasive species, pests and disease.
- Changes in productivity of current crop varieties and conversion of agricultural land to other land uses and loss of agricultural/semi-natural habitats.

Bold, transformative action is needed to drastically reduce emissions and avoid the worst impacts of accelerating climate change.

Recognizing this reality, Sacramento Mayor Darrell Steinberg and West Sacramento Mayor Christopher Cabaldon launched the Mayors' Commission on Climate Change to identify priority strategies to achieve carbon zero by 2045 and to inform Climate Action Plan updates that both cities are conducting in 2020. The Commission, composed of 19 community, public agency, academic, and private-sector leaders, convened for nine public meetings from November 2018 to May 2020 to discuss recommendations and hear input from the public.

The Commission sought to identify high-impact strategies to inform each city's Climate Action Plan update, as well as feasible, cost-effective solutions that achieve the mayors' objectives for a *Green and Growing Capital Region* by:

- Strengthening local and regional partnerships to address climate change and increase resiliency.
- Engaging community members and business leaders to build political support for robust climate action.
- Advancing social equity and economic prosperity.
- Attracting additional investments into the region.

For the purpose of the Commission, “carbon zero” is defined as *carbon neutral*, meaning that net greenhouse gas (GHG emissions) of each city equal zero. We recommend that the cities account for GHG emissions based on international protocols, which currently specify that inventories include emissions generated within city boundaries. The Commission prioritized strategies to achieve deep reductions in GHG emissions, focusing their attention on the cities’ largest sources of emissions: transportation, buildings, and waste. While the Commission focused on emission reductions within the Cities of Sacramento and West Sacramento, there is further need to advocate for accelerated emission reductions at the regional and statewide levels as well.

Technical Advisory Committees

A series of Technical Advisory Committees (TACs) were convened to support the Commission, based on the major areas of action needed to achieve carbon zero, build resilience to climate change, and support implementation.

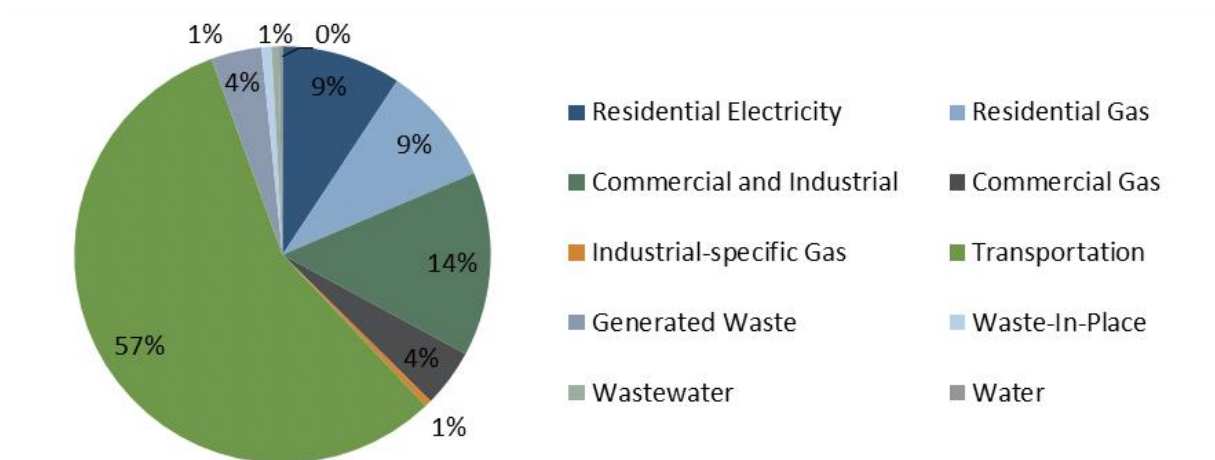


Mobility TAC members discuss trends and opportunities to inform its recommendations to the Commission.

Transportation and energy use are the top two contributors of GHG emissions in most communities nationwide, including the cities of Sacramento and West Sacramento – and therefore were the focus of the TACs on the Built Environment and Mobility. For example, gasoline and diesel consumption by on-road vehicles driven in Sacramento was the single largest source of GHG emissions in Sacramento’s 2005 GHG inventory, accounting for just over 48% of the city’s total emissions. Electricity and natural gas used to heat and cool commercial, industrial, and residential buildings accounted for another 42%.

By implementing the recommended strategies, that represent around 90% of greenhouse gas emissions, we are confident that this will put the cities on a trajectory to meet the 2045 carbon neutrality goal.

2016 City of Sacramento Community Emissions by Sector



A 2019 study found building electrification to reduce total GHG emissions in single-family homes by ~30-60% in 2020, relative to a natural gas-fueled home. As the grid decarbonizes over time, these savings are estimated to increase to ~80-90% by 2050.

Annual GHG Emissions from a Mixed-Fuel and All-Electric in Sacramento

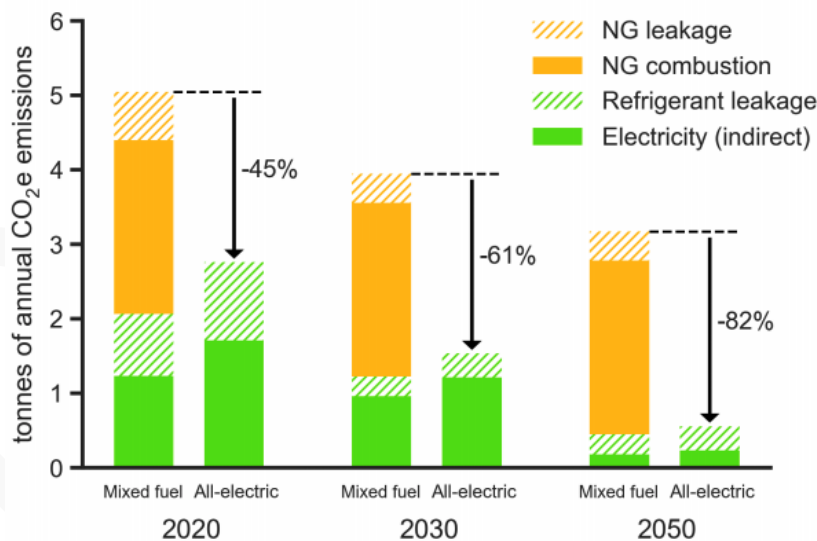


Figure X. Expected GHG emissions savings from an all-electric single-family home in Sacramento in 2020, 2030, and 2050, compared to a mixed fuel home, assuming no change in the efficiency of today's commonly available electric and natural gas end uses. 2019 Energy and Environmental Economic, Inc. study on Residential Building Electrification in California.

Executive Order B-16-2012 set a target of reaching 1.5 million ZEVs on California's roadways by 2025 and reducing transportation-related GHG emissions by 80% below 1990 levels by 2050. With the transportation sector accounting for approximately 40% of the state's emissions, achieving the targets set forth in the executive order will support the cities' vision of realizing a carbon zero future.

Cumulative California ZEV Sales Projections

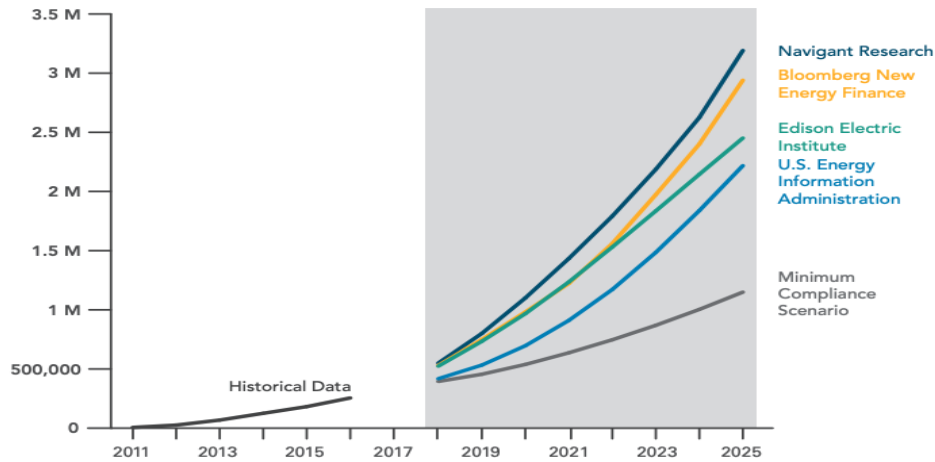


Figure X. Projections for ZEV sales in California. Experience has shown clean technology and markets continue to outpace expectations. California's 2017 Climate Change Scoping Plan.

Finally, the California Air Resources Board (CARB) 2030 Scoping Plan Update identifies reduction in growth of single-occupancy vehicle travel as necessary to achieve the statewide target of 40 percent below 1990 level emissions by 2030. Even more will be needed to achieve Governor Brown's new carbon neutrality goal by 2045.

Evidence on land use and driving shows that compact development will reduce the need to drive between 20 and 40 percent, as compared with development on the outer suburban edge with isolated homes, workplaces, and other destinations (according to Growing Cooler authors Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen). They propose it is realistic to assume a 30 percent cut in VMT with compact development. Making reasonable assumptions about growth rates, the market share of compact development, and the relationship between CO₂ reduction and VMT reduction, smart growth could, by itself, reduce total transportation-related CO₂ emissions from current trends by 7 to 10 percent as of 2050. This reduction is achievable with land-use changes alone. The authors calculate that shifting 60 percent of new growth to compact patterns would save 85 million metric tons of CO₂ annually by 2030.

Potential Impacts of Land Use and Transit Systems on GHG Emissions

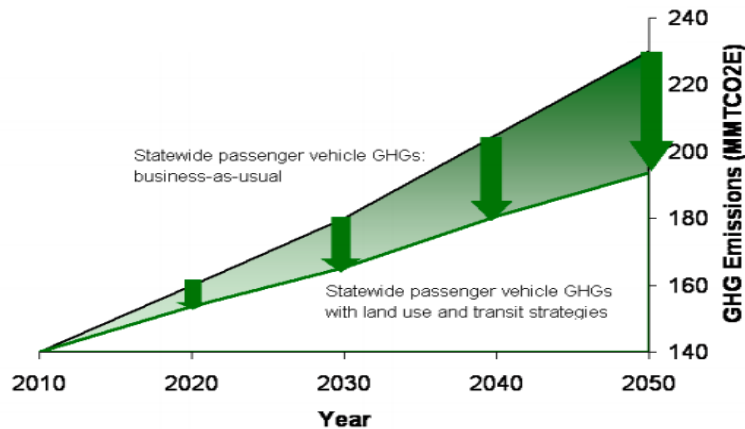


Figure X. UC Berkeley modeling results included in California's 2008 Climate Change Scoping Plan.

That said, we recommend that both cities, through their Climate Action Plan updates, do a quantitative analysis to identify the extent to which the strategies achieve the carbon neutrality goal and any additional measures needed.

The Commission also recognized the need to ensure that any strategies pursued align with public-health benefits and contribute to overall community resilience in the face of increasing climate impacts. Accordingly, the third TAC focused on community health and resiliency.

Overall, 173 technical experts and community leaders participated in the three TACs. Each TAC met several times, providing subject-matter knowledge and local context to identify strategies that are both ambitious and supportive of the Carbon Zero by 2045 mandate.

The Built Environment TAC focused on sustainable land use and building electrification, recognizing that land-use decisions play a critical role in shaping the built environment and transportation patterns, and the need to eliminate the use of natural gas to achieve a carbon zero future.

The Mobility TAC, targeting the cities' largest source of emissions, focused on shifting single-occupancy vehicle trips in internal combustion engine (ICE) vehicles to low- and zero-carbon modes by increasing the accessibility, connectivity, and safety of clean mobility options.

The Community Health and Resiliency TAC identified carbon reduction strategies that deliver important public health and resilience benefits, focusing their attention on urban greening and forestry, sustainable food systems, and community climate resilience.

Each of these sector-based TACs developed and presented recommendations to the Commission for consideration. A priority highlighted across all the TACs was the need to prioritize marginalized communities, including those that have historically borne the greatest burden from the effects of pollution and disinvestment and those on the frontlines of facing the impacts of climate change.

To provide further guidance to the cities, TACs focused on equity and funding/financing were formed.

The Equity TAC reviewed each sector-based recommendation through an equity lens to ensure strategies addressed community needs, prioritized marginalized communities, and avoided unintended consequences. The Equity TAC also developed its own recommendations to the Commission to guide the cities in operationalizing equity in planning and decision-making processes, conducting inclusive community engagement, and building community capacity.

The Funding and Finance TAC reviewed the sector-based recommendations to identify short-, med- and long-term options to fund and finance implementation. While many options were identified, the TAC emphasized that there is no "silver bullet" and that it is essential to success that the cities identify climate change as a priority in planning and budgeting. The Funding and Finance TAC was facilitated by KPMG and produced a matrix of options (Appendix A).

The Local Government Commission prepared a Supplemental Report that further details significant additional guidance from the TACs. Each of the sector-based TACs identified numerous implementation tactics for each strategy, as well as guidance regarding potential challenges.

Community and Business Engagement

The cities alone cannot achieve carbon zero; action will need to be taken across all sectors and at all levels, including by individual households, nongovernmental organizations, and businesses. Early and ongoing engagement to inform both climate action planning and implementation efforts is critical for the cities to understand potential barriers and opportunities, as well as to shape strategies in a way that responds to community needs and achieves multiple benefits. Throughout its work, the Commission gathered input from public members and key stakeholders – through youth summits, public comments at meetings and online, and business roundtables. The Commission was encouraged by the intense interest and engagement that we received from the community. Input received is summarized in Appendix B. To be successful; the cities will need to continue this critical work.

City Climate-Action Efforts

The Commission's recommendations are intended to inform the cities' updates to their Climate Action Plans, highlighting the bold actions that must be taken to achieve carbon zero by 2045. These recommendations are made in the context of the significant actions that Sacramento and West Sacramento have already taken to reduce GHG emissions.

The City of Sacramento is taking aggressive action on multiple fronts having already achieved a [24% reduction in GHG emissions from 2005 levels in 2013](#). Key actions and outcomes include:

- Increasing tree canopy from 13.9% of land cover in 2004 to 19.1% today.
- Launching over 900 electric bikeshare rentals and 400 electric carshare vehicles since 2018.
- Invested \$1.5 million to implement energy efficiency upgrades in seven libraries and community centers in 2018.
- Reduced water use per capita by 46% from 2005 levels in 2016 through water infrastructure upgrades, turf replacement and leak detection programs, and water conservation campaigns.

The City of West Sacramento, despite having fewer resources as a smaller city (population 53,727), also took significant actions and spearheaded new initiatives to reduce GHG emissions, such as:

- Launching an on-demand rideshare service with Via in 2018, which provided an average of over 350 rides on most weekdays in its first year.
- Installing over 7 miles of bike paths and separated bikeways since 2013, bringing their total to 52 miles of existing trails.

The actions that the cities have already taken should be celebrated and built upon to achieve deeper reductions in GHG emissions. Given differences in size, resources, and community culture, each of the Commission's recommendations should be further evaluated and tailored for each city while maintaining the high level of ambition, commitment, and leadership necessary to achieve carbon zero by 2045.

COMMISSION RECOMMENDATIONS

This report presents priority strategies designed to inform the cities' climate action plans and support the achievement of carbon zero by 2045. The Commission focused on priority actions to achieve carbon zero, targeting the cities' largest sources of emissions – transportation and buildings, as well as actions that promote public health, climate resilience, and social equity. As such, the Commission's recommendations do not reflect the full set of actions that will need to be taken, rather the most impactful strategies that the cities can undertake. The more detailed **Supplemental Report** provides additional context, strategies to overcome challenges, and specific tactics and resources to support implementation efforts.

The Commission's recommendations include sector-based strategies for the Built Environment, Mobility, and Community Health and Resiliency, which should be pursued in coordination with one another in order to maximize community benefits. Additionally, an integrated approach will create an enabling environment that supports each individual strategy and more widespread, community-wide adoption of decarbonization measures.

Furthermore, the Commission recognizes the way in which the cities pursue carbon reduction strategies is equally as important as the strategies themselves in order to achieve equitable outcomes and sustain progress over the coming decades. The Commission's sector-based recommendations are underpinned by a set of equity recommendations and foundational principles.

EQUITY RECOMMENDATIONS

**The following recommendations are pending adoption by the Commission at the May 13th meeting.*

The Commission recommends the cities to pursue these equity strategies to ensure fair and equitable outcomes while avoiding unintended harm to marginalized communities:

1. Operationalize equity by providing education, ensuring shared decision-making, and allocating resources that address historical and current disparities.
2. Authentically and inclusively involve marginalized communities and populations that have been historically left out of the policymaking and governance process as co-creators in all planning and implementation phases to ensure fair, equitable outcomes.
3. Expand the capacities of cultural brokers and community-based organizations that have established relationships with marginalized communities, leveraging existing community engagement efforts when possible.

Accessibility, inclusivity and shared decision-making lie at the heart of these strategies. All of the recommendations should be interpreted through a clear and focused equity lens. In their drive to carbon zero, the cities should take targeted measures to ensure that those who are least culpable and resourced are not burdened by climate-action measures. Rather, they should work to ensure that these communities benefit the first and most by the investments, improvements and new jobs generated through climate action.

The Equity TAC provided recommendations for measures the cities can take to achieve these outcomes. These recommendations are set forth in the Supplemental Report.

FOUNDATIONAL PRINCIPLES

To combat climate change at the scale and pace that the crisis demands while also strengthening the public will to sustain climate action in the decades ahead, the Commission recommends five foundational principles to guide the cities' climate action planning and implementation efforts.

Urgency

- Take significant action to sustain and accelerate municipal and community carbon elimination in the short term, with maximum feasible efforts to implement emergency-speed actions to reduce GHG emissions to eliminate emissions by 2030 as much as possible.
- Adopt an “all hands” approach by making carbon zero a priority across all city departments, programs and initiatives, working in partnership with regional agencies, local businesses, nonprofit organizations and community members.
- Create and strengthen regional alignment and partnerships to support multi-agency, cross-sectoral collaborations.

Advocacy

- Advocate for State and regional policies that encourage and enable investments and implementation measures needed to achieve carbon zero, starting in the greater Sacramento region and creating a model for statewide action.

Accountability

- Assign a senior-level position with a background in sustainability and equity in each city that reports directly to the mayor and city council to oversee all aspects of climate-change planning and implementation.
- Report progress along defined metrics of success to the mayors, city councils and the public on a quarterly basis.
- Align each city department's mission, operating procedures, funding priorities and planning documents with the carbon zero vision.

Education

- Continuously partner with regional agencies, local businesses, nonprofit organizations and community members to conduct robust education campaigns to encourage voluntary action prior to establishing mandates.
- Invest in workforce development and training programs, prioritizing marginalized communities.
- Pursue pilot projects to secure early wins and deliver tangible results that will help build public support and capacity over time.

Financial and Economic Sustainability

- Prioritize actions that spur innovation, economic development, and jobs growth and preservation in a growing low-carbon economy.
- Align capital improvement plans and investment decisions (including ballot measures) with achieving carbon zero.
- Seek solutions that balance incentives and disincentives.

CARBON-ZERO RECOMMENDATIONS

The Commission envisions vibrant, resource-efficient communities with an abundance of green public spaces that enable all residents to meet their daily needs through a range of accessible clean mobility options. These recommendations are intended to work together to drive deep reductions in GHG emission, recognizing the interconnected nature of land-use decisions, transportation patterns, community and building design, and their combined influence on community health and well being.

Prioritizing these strategies will enable all community members to thrive in the face of climate change and benefit from the cities' transition to a carbon zero future. The cities' investments, partnerships, and projects can be strategically leveraged to create healthy and prosperous communities by providing affordable housing, creating living-wage jobs, addressing food insecurity, and supporting residents in meeting their basic needs.

Built Environment

The Built Environment encompasses the human-made places in which people live, work and recreate on a day-to-day basis. This set of recommendations focuses on land use and buildings.

Land-use decisions impact two-thirds of GHG emitted in communities, including transportation and building energy use. Nearly 15% of California's GHG emissions are related to heating and cooling residential buildings, which are partly a function of house size and orientation, and are therefore strongly tied to land-use planning decisions. Residential energy use is also affected by land use and development decisions – people living in high-density urban centers emit 20% to 50% fewer GHG emissions than residents of low-density suburbs.

These decisions, which essentially determine where and how to develop, set in motion long-term trends in GHG emissions. Developing in existing urban areas that are already largely developed can curtail emissions by preserving carbon sinks and creating compact, mixed-use communities that make active transportation and public transit more accessible, viable and convenient for residents.

As California's power grid becomes cleaner with the mandate of [SB-100](#), which calls for 100% zero-carbon electricity by 2045, the cities will need to turn their attention to building electrification as a viable long-term strategy to achieve carbon zero. A combination of strategies will need to be pursued to increase all-electric new construction and retrofit existing buildings to shift away from natural gas and decrease associated health effects and GHG emissions. Appliances using natural gas – furnaces, stoves, water heaters and clothes dryers – will need to be replaced with all-electric products. Through partnerships and targeted investments, cities can raise awareness, educate property owners, and provide incentives to retrofit existing residential and commercial buildings in a cost-effective and equitable manner.



Built Environment Recommendation #1: Sustainable Land Use

Support infill growth that is consistent with the regional Sustainable Communities Strategy to ensure:

- 90% of the cities' growth is in the established and center/corridor communities and is 90% small-lot and attached homes by 2040.
- Project level VMT is 15% below (or 85% of) the regional average

This strategy was developed in accordance with [SACOG's Blueprint Principles](#), which call for the implementation of smart-growth principles to integrate land-use and transportation planning to curb sprawl, congestion and GHG emissions including: transportation choices, compact development and mixed-use development, housing choice and diversity, use of existing assets, natural resource conservation and quality design.

Prioritizing infill development will enable the cities to reinvest in established communities and create more compact, mixed-use neighborhoods, which can enhance existing public services, bolster economic activity, and generate many social benefits. The cities can create diverse, vibrant communities by providing a mix of different building and housing types and achieving a level of density that enables residents meet their daily needs without a car. With space at a premium in dense areas, disincentives for driving, such as limited parking, often further reinforce motivations for choosing low- or zero-carbon transportation modes.



Built Environment Recommendation #2: Electrification of New Construction

Mandate all-electric construction to eliminate fossil-fuel use in new buildings by 2023.

With the passage of SB-100, which mandates 100% carbon-free electricity by 2045, the remaining emissions to address in the buildings sector largely stem from the use of natural gas. Electrifying existing buildings will be a challenge that requires a significant level of effort and by mandating all-electric new construction; the cities can prevent this challenge from growing even larger. By adopting an electrification ordinance for new construction, Sacramento and West Sacramento can join nearly 30 California cities with similar ordinances or reach codes.

Mandating new buildings to be fully electrified will future-proof these buildings (i.e. prepare for climate impacts such as extreme heat and avoid retrofit costs) while helping the market mature. Studies have shown that building electrification can reduce the cost of constructing new homes, lower energy bills, create local jobs, improve air quality, and put downward pressure on electricity rates. Furthermore, all-electric buildings will undoubtedly improve overall indoor air quality and health-related issues by eliminating natural gas combustion inside homes.



Built Environment Recommendation #3: Electrification of Existing Buildings

Transition 25% of existing residential and small commercial buildings to all electric by 2030.

Electrification of existing buildings is a challenging but necessary strategy to reach carbon zero. Existing buildings will need to be retrofitted with new electric equipment and appliances, and older buildings will need upgraded electrical panels to support the increased load. To ensure grid stability, this strategy must also be pursued in tandem with deep energy-efficiency retrofits through partnerships with utilities, nonprofits and the private sector.

Electrifying the cities' existing building stock to all-electric will generate deep reductions in GHG emissions while modernizing older buildings and delivering a range of community benefits. Reducing fossil-fuel use in buildings can significantly improve public safety and indoor air quality while generating cost savings

over time for residents and building occupants. The cities can also support economic development by creating jobs to perform retrofits and attracting new businesses and investments from philanthropic institutions, public agencies and businesses committed to a low- or zero-carbon future.

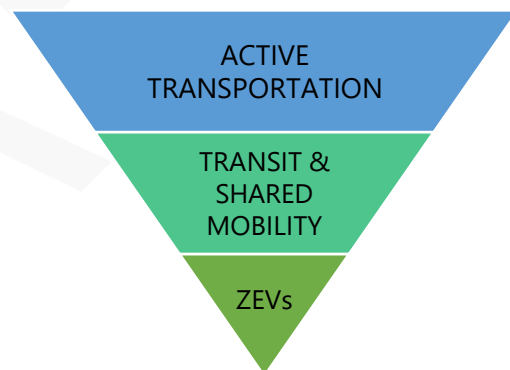
Mobility

As the largest emitting sector in both cities, a comprehensive approach must be undertaken to enable clean transportation solutions by improving accessibility, connectivity and safety.

With the passage of [SB-375](#), metropolitan planning organizations (MPOs) like SACOG are responsible for aligning land-use and transportation planning in a way that reduces emissions. The California Air Resources Board has also established regional targets for reducing emissions that MPOs must create plans to achieve through their Metropolitan Transportation Plan/Sustainable Communities Strategies (MTP/SCS). [SACOG's 2020 MTP/SCS](#) highlights a multimodal transportation plan to achieve our region's target of a 19% reduction of GHG emissions per capita.

[SB-743](#) creates a process to change the way that CEQA analyzes transportation impacts, particularly within areas served by transit, to focus on reducing vehicle miles traveled (VMT). It also provides streamlined review of land-use and transportation projects that will help to reduce future VMT growth.

To reduce VMTs emissions from passenger vehicles, particularly single-occupancy vehicle trips, the cities will need to facilitate drastic mode shifts to achieve widespread adoption of clean mobility options. The order of mobility strategies reflect the Commission's recommended modal hierarchy, which prioritizes the largest focus on active transportation as the healthiest and most efficient option, public transit and pooled shared mobility for longer trips, and finally zero-emission vehicles (ZEVs) for trips where transit or active transportation is not a viable option, as depicted in the graphic to the right.



Mobility Recommendation #1: Active Transportation

Expand and enhance accessibility to low-stress, connected infrastructure for walking and rolling, prioritizing improvements that address specific community and neighborhood needs so that:

- 30% of all trips are by active transportation by 2030.
- 40% of all trips are by active transportation by 2045.

This strategy is focused on making active transportation a viable and attractive option by creating seamless network of active transportation corridors and providing basic amenities at the neighborhood level so that shorter trips can be taken by walking or rolling to meet daily needs. Through pedestrian-centric design and improvements to walking and biking infrastructure, the cities can create a safe, attractive environment that promotes active transportation and reduces vehicle use, traffic congestion and air pollution. Currently, roughly 10% of trips within the cities are taken by active transportation.

The potential of reducing emissions by increasing active transportation is undeniable. The 2017 National Household Transportation Survey found that 21.4% of all vehicle trips were one mile or less. With VMT on the rise throughout California, pedestrian-first policies and investments can significantly reduce VMT, particularly for shorter trips that can be easily completed through active transportation modes. Active transportation can also provide important benefits from improved health as a result of regular physical activity and cost-savings for residents.



Mobility Recommendation #2: Transit and Shared Mobility

Expand and improve transit and shared mobility services to be more accessible, affordable, timely and attractive than single-occupancy-vehicle use so that:

- 30% of all trips are by transit and pooled shared mobility by 2030.
- 50% of all trips are by transit and pooled shared mobility by 2045.

To achieve carbon zero, transit must be at the center of a robust multi-modal transportation network. Particularly for longer trips where active transportation may not be feasible, transit and pooled shared mobility options should be prioritized. In Sacramento and West Sacramento, only about 4% trips are currently completed by transit, and drastic changes are needed to achieve the Commission's recommended targets.

The rapid evolution of the transportation sector has brought online numerous shared mobility services – from bike- and scooter-shares to ride-sharing and ride-hailing services. Looking beyond traditional public transportation, the cities can leverage both transit and shared-mobility services to enable residents to use multiple clean-mobility options to meet their travel demands.



Mobility Recommendation #3: Zero-Emission Vehicles

Develop a comprehensive package of incentives, disincentives and policies to encourage the adoption of zero-emission vehicles (ZEVs) so that:

- 70% of new vehicle registrations will be for ZEVs by 2030.
- All public, private and shared fleets are fully electrified by 2045.

This strategy supports the Commission's overarching vision of reducing personal-vehicle ownership and single-occupancy vehicle trips to reduce emissions, congestion and vehicular accidents. The cities should first encourage the use of active transportation, public transit, and shared mobility services, then electrify remaining vehicles, recognizing that some users need their cars to meet their travel needs.

Currently, approximately 0.8% of light-duty vehicles registered in the cities are ZEVs, demonstrating the scale of the challenge at hand, as well as the significant emissions reduction potential. State and federal fuel economy standards and California's goal of 5 million ZEVs on the roads by 2030 and 250,000 electric vehicle charging stations by 2025 put us on a trajectory towards cleaner vehicles and improved air quality. But cities will be instrumental in advancing ZEVs— by creating a strategic network of public charging and hydrogen fueling stations, including the installation of chargers at workplaces, multifamily housing developments and community hubs, the cities can build confidence among drivers to purchase ZEVs instead of Internal Combustion Engine (ICE) vehicles. Such a transition can also spur economic growth – workforce development and transition programs should be a core part of the cities' ZEV strategy to create living wage jobs for low-income workers.

Community Health and Resiliency

The strategies included in this sector highlight opportunities to avoid or reduce carbon emissions while achieving important public health and climate resilience benefits. They are also designed to create an enabling environment for the Commission's Built Environment and Mobility recommendations. For example, expanding urban forestry can reduce building energy use and provide a safer, more attractive environment for walking and rolling.

In their pursuit to achieve carbon zero, the cities must also turn their attention directly to the impacts of climate change that communities are already grappling with. The State of California has sent clear signals to local jurisdictions on the urgent need to adapt and build resilience to climate change impacts. With the passage of [SB-379](#), local jurisdictions are required to identify climate change risks and adaptation strategies in their local hazard mitigation plans or in their General Plan safety elements.



Community Health and Resiliency Recommendation #1: Urban Greening and Forestry

Expand green infrastructure to ensure that all neighborhoods, starting with historically marginalized communities and tree-deficient neighborhoods, have:

- Access to green space within a quarter-mile by 2030.
- A baseline canopy of 25% by 2030, and 35% by 2045.

Green Infrastructure includes natural areas and nature-based design features that deliver a wide range of ecosystem services including stormwater management, improved air quality, heat mitigation, and more. Increasing and maintaining tree canopy, vegetation and green spaces will allow for greater carbon sequestration and decrease cooling and heating demands for buildings. Increasing access to trees, green space and parks also increases exposure to nature, promotes outdoor physical activity and play, and improves physical and mental health.

Green infrastructure has proven to be cost-effective with long-term benefits outweighing costs. For example, [USDA Forest Service studies](#) found the economic value of avoided mortality, morbidity and electricity consumption by increasing canopy cover to be an estimated \$21-49 annually per capita. In another analysis of five cities across the U.S., cities spent \$13-\$65 annually per tree and benefits ranged from \$31 to \$89 per tree. With a multitude of nonprofits actively working to expand tree canopy and increase park access, the cities can leverage existing efforts and forge partnerships to implement this strategy.



Community Health and Resiliency Recommendation #2: Sustainable Food Systems

Increase food security and access to healthy, affordable food for all communities, while supporting a regenerative food system by:

- Sourcing 25% of food locally within a 200-mile radius by 2030, and 40% by 2045.
- Reducing 50% of aggregate food waste by 2025, and 75% by 2030.

Creating a local, regenerative food system will avoid emissions related to food transport and food waste while providing a range of community health and resilience benefits. In California, food waste is the single-most prevalent item in landfills; however, 14.4% of Sacramento County residents and 16.67% of

Yolo County residents experienced food insecurity in 2017. The cities can address both of these challenges by promoting local food procurement, utilizing organic waste to increase agricultural productivity, and creating a food recovery to food security network.

The benefits of local food systems have been proven in the Sacramento region. A [University of California study](#) of the Sacramento region found that for every \$1 million in food produced by local farmers and sold through direct marketing, such as farmers markets, 31.8 jobs are generated (compared to 10.5 jobs generated for every \$1 million in food procured through large-scale distributors). By implementing this strategy, the cities can create a thriving local food system while increasing the accessibility and affordability of healthy food options, particularly for marginalized communities.



Community Health and Resiliency Recommendation #3: Community Climate Resilience

Identify climate vulnerabilities and adaptation strategies as part of the climate action plan or general plan updates by 2022. Develop and implement preparedness measures, with a priority focus initially on increasing the resilience of communities most vulnerable to climate-change impacts by investing in existing community assets and networks to increase community adaptive capacity.

In the Sacramento region, communities will need to prepare for and mitigate a range of climate-related impacts and disasters, including rising temperatures and more extreme heat waves, variable precipitation patterns that increase the risk of severe drought and flooding, and more devastating wildfires. The cities will need to conduct vulnerability assessments that evaluate these risks, and identify adaptation strategies that prioritize vulnerable populations on the frontlines of these impacts and communities that will be disproportionately impacted.

The cities alone cannot safeguard communities from the worsening impacts of climate change; individual- and neighborhood-level action is critical to build resilience and respond to emergencies. Robust community engagement is needed to co-create adaptation strategies and determine appropriate implementation measures that preserve community culture, provide local economic growth opportunities, and create a sense of shared ownership and responsibility for community resilience. By focusing their efforts on investing in existing community assets and networks to increase community adaptive capacity, the cities can build community capacity and resilience in a way that enables all residents to meet their basic needs and enhances social cohesion and self-sufficiency.

YEAR ONE PROJECTS

**The following recommendations are pending adoption by the Commission at the May 13th meeting*

The pace and scale of climate change and the worsening impacts upon our communities demand urgent action. The Commission urges the cities to pursue early actions to demonstrate the benefits of reducing emissions and build momentum for their full suite of strategies. Projects that the cities are encouraged to implement in its first year of action include the following.

Overarching Priorities

1. Position climate as a priority by establishing senior level positions within each city, integrating climate across departments and initiatives, implementing regular public reporting at council meetings, and addressing the climate impact of all council agenda items.
2. Establish an Environmental Justice Collaborative Governance Committee facilitated by the cities but led by the community to support marginalized communities, particularly communities of color and youth, in owning and shaping environmental solutions.
3. Define marginalized populations and climate impacts, using existing tools, and engage with community leaders to ensure that the definition is properly vetted prior to adoption.
4. Advocate for state and federal legislative changes to advance building and transportation electrification, sustainable development and climate resiliency, such as updating Title 24 to include building decarbonization and prioritizing green economy investments with state and federal COVID-19 stimulus packages.

COVID-19 Climate Connections

Help Sacramento area residents and businesses bounce back faster and stronger.

- **Invest in green, innovative, entrepreneurial and inclusive workforce training programs** to get people back to work and to accelerate clean economic development opportunities including:
 - Providing financial support for California Mobility Center and CivicLab to help advance the cities as regional leaders and testbeds for clean, innovative mobility solutions.
 - Creating employment opportunities through workforce development and transition programs to achieve equitable benefits and access to ZEV technologies for low-income populations and underserved communities.
- **Establish a “food recovery to food security” network** with restaurants, catering companies, grocery stores, local food banks, and community food hubs to reduce food waste and address food insecurity.
- **Establish a comprehensive electrification and energy-efficiency program** to reduce the energy burden of low-income residences and small business owners.
 - Adopt and implement an electrification ordinance for new buildings that would result in 100% electrification of all new construction by 2023.

- Promote utility energy efficiency programs to reduce energy costs for families and businesses and partner with groups such as Grid Alternatives to install solar energy in marginalized communities to increase recovery capacity

Sustain car-light lifestyles and air quality improvements seen during shelter-in-place by accelerating targeted community investments.

- **Maintain reduced car travel through policies and education that support telecommuting**—the cities should reassess their telecommuting policies to allow more staff to work remotely and partner with the chambers of commerce to encourage employers to continue telecommuting programs.
- **Adopt a policy to prioritize bicycle and pedestrian travel** at the top of the modal hierarchy as part of the cities' General and Climate Action Plan updates. Funding should be proportionally allocated to support shifts to active transportation.
- **Conduct a comprehensive neighborhood-level audit to identify deficient active transportation infrastructure** and prioritizing 2021 investments in high-injury portions of the network.
- **Expand free or affordable ZEV carshare programs**, such as Our Community CarShare
- **Establish car-free districts** on weekend nights in areas that offer local commerce, recreation, and arts and culture.
- **Support recovery of public transit agencies through subsidized free or reduced fare for students** (e.g. City of Sacramento and Sacramento Regional Transit pilot).

Increase community resilience investments to prepare for future crises.

- **Expand Community Emergency Response Training (CERTs) programs** to train residents in climate resilience and disaster response skills. Create pathways for employment by allocating resources to community ambassador positions that support emergency communications and neighborhood-level preparedness and recovery.
- **Identify communities without access to green space within a quarter mile and expand green infrastructure** to ensure that all neighborhoods, starting with historically marginalized communities, have access to parks and open space.

CONCLUSION

By embarking on a path toward carbon zero by 2045, the cities of Sacramento and West Sacramento are positioning the region as a national and international model for a climate-smart future.

While establishing an ambitious target and prioritizing the strategies recommended by the Commission and the many technical experts and community members involved in this process critical, the most important component is implementation.

Turning this plan into action rests on more than just ideas and good intentions. It requires residents, businesses, City government, and other institutions to urgently rise to the challenge of making big changes – changes in our infrastructure, technological advances, ramped up green workforce development, and change in the decisions we make every day as members of the community. Everyone must play a role to ensure a more equitable, prosperous and resilient future for all residents.

The dramatic steps that government at all levels and the public at large have taken as a result of COVID-19 highlight the ability of our leaders and community members to respond quickly and decisively to crisis. These changes have deeply impacted families and the economy, but they have also increased awareness of the weaknesses of our current system— from socioeconomic and racial inequities, to the fragility of global supply chains and the impact of consumerism and car-centric lifestyles on our environment. Despite the immense tragedy we’ve experienced and witnessed, we’ve also learned lessons about how quickly things can change— from air quality improvements and increased wildlife to profound human resilience and innovation. The disruption was unavoidable, but the ultimate outcome is far from determined— now is our chance to repair and reimagine our systems and rebuild in ways that increase community resilience and equity for all.

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