

Recommendations to the Mayors' Commission on Climate Change

Built Environment Technical Advisory Committee (TAC)

Preliminary Recommendations: March 11, 2019 Draft

Built Environment TAC Process

The Built Environment TAC, comprised of agency, industry, and community leaders, convened over three facilitated meetings to identify a carbon zero vision, key milestones to achieve the vision by 2045, high-impact strategies to achieve the identified milestones, immediate actions including initial steps and pilot projects, and strategies to overcome common challenges.

This document includes the vision, milestones, and high-impact strategies. Based on input and comments shared at the March 18th public meeting of the Mayors' Commission on Climate Change, the TAC will reconvene to further refine its recommendations. After the TACs for Mobility and Community Health & Resiliency convene, the full set of recommendations will be released for public comment prior to finalization.

Built Environment 2045 Vision

We envision compact, walkable communities that integrate efficient design, localized renewable energy systems, and nature-based solutions, leveraging carbon neutrality to achieve positive health, equity, economic development, and resiliency outcomes. Investments will match priorities and strategies will be pursued in a manner that considers both costs, including avoided costs, and benefits.

Communities will be fossil-free and fully electrified with an abundance of green space and affordable housing, designed to prioritize vibrant public spaces, multimodal and active transportation, resource conservation, and quality of life for all.

Key Principles to Achieve Vision

1. Authentically and inclusively engage residents, stakeholders, businesses and community leaders.
2. Prioritize investments and projects in existing communities and existing development, particularly in disadvantaged communities.
3. Align all local plans with the recommendations of the Commission by 2025.
4. Forge regional partnerships to support ambitious action on climate change.
5. Enable and implement the ambitious actions necessary to achieve the recommended carbon neutrality goal.

Catalyzing Concept

Zero Carbon Innovation Zones

Create a zoning category to attract research and development, venture capital, and targeted investments to create Eco-Villages that embody the Living Community Challenge framework. These Eco-Villages can demonstrate a regenerative approach to development (energy, water, waste, food systems, and more) while leveraging local talent to create a beautiful space that can educate and inspire communities. By experimenting with tiny houses, relocatable micro-dwelling clusters, deep retrofits of existing buildings, and mixed-use infill development, Sacramento and West Sacramento can rise to the forefront of innovation in sustainable architecture and serve as a model for the state.

Existing Residential Buildings

Key Milestones

1. 33% of all homes are fully electrified and fossil-free by 2030 (proportional share of low-income, multi-family, and single-family homes). 50% of replacement water heating/furnaces are electric.
2. 33% of homes retrofitted to be Electric Vehicle (EV) ready and 30% of parking spaces in multi-family buildings allocated for vehicle charging or alternative fuel infrastructure by 2030.
3. 75% of energy provided is carbon-free and renewable power (e.g. solar, wind) by 2030 with a priority on expansion of local generation.
4. Average home energy score improved by 33%, including 33% of existing residential attics retrofitted to R-38 insulation, by 2030.

Recommended Strategies

Establish a comprehensive, coordinated education campaign for property owners and occupants to be integrated as part of each strategy. Establish a shared understanding of existing incentives and how to access them, including SMUD incentive programs and rebates for contractors and vendors.

1. Develop a legal pathway to **adopt a Local Energy Code to incentivize electrification** and provide a pathway to mandatory replacements.
2. **Permit Compliance at Point of Sale:** Develop an inspection program to improve permit compliance and identify unpermitted improvements, to be implemented at point-of-sale. Program would support reach codes by ensuring that all homes sold have pulled permits and complied with codes and standards for HVACs, water heaters, and other improvements.
3. **Electrify accounts instead of upgrading natural gas infrastructure** by coordinating efforts between PG&E, SMUD and the City to institute regional bans on natural gas so that the City is giving clear signals that would aid utilities to incentivize early retirement of individual gas appliances.
4. **Establish a comprehensive strategy for low-income residents** and affordable housing to adopt cost-saving energy efficiency measures.
5. Develop legal pathways to **impose GHG mitigation fees** prior to the issuance of building permits for retrofits that include natural gas appliances, and implement an inspection program for existing buildings that have gas appliances and are not undergoing retrofits.
6. Develop a legal pathway to **impose emissions limits for buildings** that have gas appliances and are not undergoing retrofits by restricting the concentrations of methane and/or harmful pollutants such as NOx.
7. **EV Charging Retrofits in Existing Commercial and Multifamily Buildings:** Require major retrofits in commercial and multifamily buildings to meet CalGreen requirements for "EV Ready" charging spaces and infrastructure. Define what constitutes as a "major" retrofit and consider a phased approach to requiring the installation of EV chargers absent any major retrofits already planned.
8. Work with SMUD to **develop distribution-level solar PV** on the customer-side of the meter including **community solar projects**. Identify places to locate west-facing arrays or possible tracking systems for better generation at summer afternoon peak demand 5-8pm.
9. Develop a local ordinance to **require an energy audit and minimum energy efficiency at point of sale** for all buildings. Buildings not meeting energy efficiency standards must conduct upgrades before building is sold or the buyer will be responsible for efficiency upgrades within 60 days of purchase.

Prior to making this a mandate, find a way to encourage voluntary action, such as by creating a financing incentive.

10. **Upgrade the Rental Housing Inspection:** Set attic insulation standard for residential rental units to R-38 and provide landlords one year to comply after inspection. Work with low-income community weatherization groups to connect low-income homeowners/landlords with financing programs. If zero insulation, recommend attic floor seal first. Check for permit compliance on existing equipment and systems.
11. Adopt a **rate-based infrastructure charge** to better incentivize low-energy users and property owners with on-site solar, and to ensure SMUD continues to have sufficient resources to pay for infrastructure.

Existing Commercial Buildings

Key Milestones

1. All buildings have completed an energy benchmark and audit by 2025.
2. On-site combustion and fossil fuel use eliminated in 33% in all buildings by 2030.
3. 30% reduction in carbon emissions for commercial buildings by 2030.
4. 30% of parking spaces allocated to EV charging or alternative fuel infrastructure by 2030.
5. City buildings hit near zero (all electric) by 2030.

Recommended Strategies

1. Pass **energy benchmarking and use disclosure ordinance** and couple this with a new **Building Carbon Emissions Rating System** that is tied to our 2045 carbon goals. Establish reduction rating targets.
2. For small commercial buildings, **mandate replacement of gas appliances with electric.**
3. **Establish Permit Compliance at Point of Sale:** Develop an inspection program to improve permit compliance and identify unpermitted improvements, to be implemented at point-of-sale. Program would support reach codes by ensuring that all homes sold have pulled permits and complied with codes and standards for HVACs, water heaters, and other improvements.
4. For larger commercial buildings, **establish maximum carbon ratings metric** (33% below 2019 levels by 2030) as a requirement to sell or re-lease a building (compliance via efficiency, electrification, reduction in high-GWP refrigerants, or contracting to a higher renewable %).
5. Develop a master plan to pursue energy efficiency and **electrification projects for city buildings.**
6. **Close the gap between electrification programs and implementation,** and increase adoption of existing incentives for electrification.
7. Adopt a local building code ordinance to trigger **mandated EV installations** (by 2025 for high-rise, by 2030 for mid-rise, and by 2035 for low-rise).
8. Amend **local building code to include electrification, refrigerants, and evaporative cooling.**
9. Advocate for CalGreen to **require electric space and water heating** in new buildings and in equipment replacements.
10. **Encourage business models that actively promote electrification,** including establishing a brand, promoting the use of incentives, and investing in workforce development

11. Develop legal pathways to **impose GHG mitigation fees** prior to the issuance of building permits for retrofits that include natural gas appliances, and implement an inspection program for existing buildings that have gas appliances and are not undergoing retrofits.
12. Develop a legal pathway to **impose emissions limits for buildings** that have gas appliances and are not undergoing retrofits by restricting the concentrations of methane and/or harmful pollutants.
13. **Adopt a rate-based infrastructure charge** to better incentivize low-energy users and property owners with on-site solar, and to ensure SMUD continues to have sufficient resources to pay for infrastructure.

New Construction

Key Milestones

1. 100% of all new residential homes, and 80% of all new commercial buildings, are carbon neutral by 2030.
2. All buildings have benchmarking capability and report annually by 2030. All buildings built after 2030 report energy, water use and air quality and GHG emissions.
3. Current (2019) number of units of affordable housing within ½ mile of a light rail station or a high-frequency-service bus stop tripled by 2045.
4. 50% increase in dwelling unit construction by 2030.
5. All new single-unit and multi-unit dwelling garages equipped with EV chargers by 2030. 30% of parking spaces for all new multi-family complexes and non-residential buildings equipped with EV chargers.

Recommended Strategies

1. Develop a legal pathway to adopt and implement a local building ordinance that would result in **100% electrification of all new construction**. Measure could include options for some building types to be exempt if needed.
2. Work with developers to **adopt data standards and metrics** for all data reporting. Develop pathway for voluntary to mandated benchmarking and annual reporting.
3. **Fast track alignment with CEC-approved certifications** (e.g. LEED Platinum and Living Building Challenge certifications) that are modeled after leading building industry certifications.
4. Develop legal pathways to **impose a GHG mitigation fee for emissions associated with natural gas**, and to prohibit gas infrastructure or appliances in development projects subject to CEQA review.
5. **Establish an outreach and education campaign** to assist with implementation about next generation building techniques and technologies.
6. **Adopt an EV charging reach code** that requires all new commercial and multifamily buildings to exceed minimum state standards for “EV Ready” charging spaces and infrastructure in commercial and multi-family buildings.
7. Identify ways to **reduce the cost of land, labor, and materials** to expand TOD affordable housing.
8. Adopt a local ordinance to **maximize energy efficiency with options for PV and storage**.
9. **Adopt a rate-based infrastructure charge** to better incentivize low-energy users and property owners with on-site solar and ensure SMUD continues to have resources to pay for infrastructure.

Land Use Patterns

Key Milestones

1. Regional urban growth boundary and agricultural easements established and enforced by 2025.
2. 35,000 new dwelling units within 1/2 mile of high-quality transit developed by 2030.
3. 70% of City households pay no more than 35% of their income for housing by 2030.
4. 50% of all trips utilize transit or active modes of transport by 2030.
5. 30% of households live without a car by 2030 and 50% live without a car by 2045.

Recommended Strategies

1. Advocate for legislation and regional cooperation to **develop a regional urban growth boundary** that is limited to existing urban development and already-approved development projects. Prioritize and enforce policies across the region to eliminate development on prime or potentially prime farmland, sensitive natural habitats, groundwater recharge areas, and land that other ecosystem benefits.
2. Complete all planning and zoning updates to **prioritize Transit-Oriented Development (TOD)** and allow and streamline greater density.
3. **Modify single family dwelling designations** within the City to increase allowable density.
4. **Establish a locational efficiency metric** by 2020 to prioritize low emissions development, which could be a combination of walk score, Vehicles Miles Traveled (VMT), carbon dioxide equivalent (CO₂e) and/or building siting and efficiency.
5. Establish a new authority to **track displacement, equity, and environmental justice**, while also tracking greenfield development.
6. **Create multifunctional public spaces** that meet the needs of all residents including co-locating facilities for parks, meetings, stormwater, recreation, GHG sequestration, water storage, etc.
7. **Adopt a cool pavements ordinance** and begin implementing by 2020.
8. Identify areas to **pilot emissions-free zones**, including the necessary types of infrastructure investment, transportation programs, and appropriate land uses that would support viable districts where single-occupant vehicles are not allowed.
9. Establish a funding program and partnerships to **implement affordable housing near transit**.
10. Identify options to **reduce impacts from the regional freeway network** on people, places and systems while preserving the ability to move regional and national goods efficiently through the region.

Green Space

Key Milestones

1. 200,000 new trees planted in disadvantaged communities by 2030.
2. Average tree canopy of 25% by 2030 and to 35% by 2045.
3. 25% increase in tree canopy on private property by 2030.
4. Park or green space provided within a 5-minute walk of all residences by 2030.
5. All green space managed with biodiversity and ecological principles and plant communities.

Recommended Strategies

1. **Plant 200,000 trees** in Sacramento and West Sacramento’s disadvantaged communities and link to a “tree stewards” program to educate the community about the benefits of trees and how to care for them.
2. Adopt a standard policy and set of practices to **expand urban tree canopy** and placing vegetative barriers between busy roadways and developments such as residential homes, schools, parks, and other public places to reduce exposure to air pollutants from heavy traffic
3. Effectively **manage public open space and park lands for greatest carbon sequestration**. Restore natural areas and evaluate drainage canal systems for naturalization as green space.
4. **Maintain health of existing tree canopy** and seek ways to support mature tree management, care, and removal in disadvantaged communities.
5. Purchase or use distressed or blighted lands to **expand green space**.
6. **Create a Regional Biodiversity Plan** that establishes shared goals for local government agencies to preserve, maintain, and expand open space and protect biodiversity.
7. **Create innovation in park standards** – how they are created and applied to achieve maximum benefits, including traditional parks, trails, parklets, plazas, and access to interactions with nature.

Funding and Financing Strategies

1. **Pursue existing state and federal grant opportunities**, including California Climate Investment programs.
2. **Increase taxes and fees on vacant, blighted, abandoned, or unoccupied properties** to reduce the perceived value of vacant property and increase the pace at which these properties are turned over. Transition property tax obligations from buildings to land and increase taxes for undeveloped land within the City.
3. Explore options and **adopt a financing district** for encouraging development on abandoned, blighted, or undeveloped properties within the City. Work across the region to establish similar districts.
4. Work with the State to **establish a statutory exemption from CEQA** for projects that meet the Commission’s climate and equity goals, prioritize infill development, and reduce sprawl.
5. Fully implement SB-743 and **establish a VMT fee** to support equitable, VMT-reducing projects.
6. Work with the State to **establish additional funding mechanisms out of CCI** or through another funding vehicle, using Sacramento and West Sacramento as a pilot.
7. **Establish relationships with large developers** that can help support the transformation needed to meet our milestones and longer-term goal of carbon neutrality.
8. **Establish a sustainable funding mechanism** (e.g. a revolving fund) for city land use/development related departments that do not rely upon permit fees for operating revenue while avoiding de-funding planning and building functions that rely on fee revenue.
9. **Fees for buildings** in the lowest tier of building carbon emissions rating system (reference existing commercial section) which could be paid into a fund for financing upgrades.
10. **Work with philanthropy to pursue replicable pilot projects** and to establish Sacramento and West Sacramento as model communities for other parts of the U.S. to follow.