

FEDERAL, STATE, AND REGIONAL CLIMATE INITIATIVES

Federal Initiatives

In December 2021, President Biden issued Executive Order 14057, which sets a range of goals to reduce U.S. greenhouse gas (GHG) emission by 50% to 52% from 2005 levels by 2030 and limit global warming to 1.5 degrees Celsius.¹ Federal goals relevant to carbon neutrality include:

- 100% carbon-free electricity by 2030, including 50% on a 24/7 basis;
- 100% zero-emission vehicle (ZEV) acquisitions by 2035, including 100% light-duty acquisitions by 2027; and
- Net-zero emission buildings by 2045, including a 50% reduction by 2032.

State Initiatives

In October 2020, the California Air Resources Board (CARB) released a report, *Achieving Carbon Neutrality in California*, that evaluates scenarios to achieve carbon neutrality in California by 2045.² This report found that ambitious near-term actions focused on energy efficiency, transportation and building electrification, carbon-free electricity, and reductions in nonenergy, noncombustion GHG emissions were needed to achieve this goal. The report also highlighted the importance of scaling up the State's research, development, and deployment efforts around GHG removal strategies. In 2021, Governor Newsom directed State agencies to assess pathways for the State to achieve carbon neutrality by a more advanced target year of 2035.

Senate Bill (SB) 100, or the "100 Percent Clean Energy Act of 2018," requires 100% of electric retail sales to end-use customers to be supplied by renewable energy and carbon-free sources by 2045 and updates the State's Renewables Portfolio Standard to ensure that at least 60% of California's electricity is renewable by 2030. As required by this legislation, the California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Air Resources Board (CARB) prepared a report that found the State can achieve SB 100 through multiple pathways.³

The State has set goals for adoption of ZEVs, which include both electric vehicles (EV) and hydrogen fuel cell vehicles. California's ZEV Action Plan outlines the strategy to reach Statewide

¹ Office of the Federal Chief Sustainability Officer, *Federal Sustainability Plan*: <https://www.sustainability.gov/federalsustainabilityplan/index.html>.

² The California Air Resources Board, "Carbon Neutrality": <https://ww2.arb.ca.gov/our-work/programs/carbon-neutrality>.

³ The California Energy Commission, "California Releases Report Charting Path to 100 Percent Clean Energy": <https://www.energy.ca.gov/news/2021-03/california-releases-report-charting-path-100-percent-clean-electricity>.

goals for ZEV adoption: 1.5 million by 2025 and 5 million by 2030, established by Executive Orders B-16-12 and B-48-18, respectively. These Executive Orders also created targets for EV charging infrastructure: 250,000 EV charging stations Statewide, including 10,000 DC fast charging stations, by 2025. State agencies and utilities have developed incentive programs for both vehicles and charging infrastructure to support these ambitious goals. In September 2020, Governor Newsom signed Executive Order N-79-20, which establishes goals to phase out fossil fuel use in the transportation sector.⁴ This Order establishes the following goals for new vehicle sales in California:

- 100% of new passenger cars and trucks will be ZEVs by 2035;
- 100% of off-road vehicles and equipment will be zero-emission by 2035; and
- 100% of medium-duty and heavy-duty vehicles will be ZEVs by 2045 (for all feasible applications).

Efforts to promote building decarbonization are also under way at the State level. As directed by Assembly Bill 3232, the California Energy Commission (CEC) developed the California Building Decarbonization Assessment to evaluate the potential to reduce GHG emissions in residential and commercial buildings by at least 40% below 1990 levels by 2030.⁵ Published in August 2021, the report found that the State could achieve this goal by expanding the use of electric heat pumps, weatherizing and electrifying existing buildings, decreasing refrigerant leakage, promoting fuel switching from natural gas to electricity, and investing in clean energy workforce training. Per SB 1477, the CEC has launched the Building Initiative for Low-Emissions Development (BUILD) program, which provides technical assistance and financial incentives for new, low-income residential building projects using near-zero-emission building technologies.⁶

Regional Initiatives

Silicon Valley Clean Energy (SVCE) has a decarbonization strategy focused on procuring and maintaining a carbon-free power supply, electrifying the built environment and transportation, and promoting energy efficiency and successful grid integration.⁷ In 2019, SVCE adopted an EV Infrastructure Join Action Plan to assess EV charging needs across the service territory and identify new SVCE programs focused on charger deployment. These programs include a transportation electrification workgroup, regional EV leadership recognition programs,

⁴ California Air Resources Board, Governor Newsom’s Zero-Emission by 2035 Executive Order (N-79-20), January 19, 2021: <https://ww2.arb.ca.gov/resources/fact-sheets/governor-newsoms-zero-emission-2035-executive-order-n-79-20>.

⁵ The California Energy Commission, Building Decarbonization Assessment: <https://www.energy.ca.gov/data-reports/reports/building-decarbonization-assessment>.

⁶ The California Energy Commission, “The BUILD Program Guidelines”: <https://www.energy.ca.gov/publications/2022/building-initiative-low-emissions-development-build-program-guidelines-1st>.

⁷ Silicon Valley Clean Energy, Decarbonization Strategy and Programs Roadmap: <https://www.svcleanenergy.org/decarbonization/>.

incentives for DC fast-charging in SVCE-defined priority areas (multi-unit dwellings and corridor uses), technical assistance for multi-unit dwelling residential charging projects, workplace charging rebates, and fleet electrification grants.⁸ Adopted in 2020, SVCE's Building Decarbonization Joint Action Plan identifies strategies to decarbonize new and existing buildings. Strategies include more advanced reach codes for 2022, a feasibility assessment for natural gas phase-out by 2045, local policies to decarbonize existing buildings, the FutureFit Homes and Buildings program, accessible financing, and efforts to support market development.⁹

Santa Clara County is currently developing a Climate Roadmap 2030 to align existing GHG emission reduction efforts across the County and facilitate regional partnerships. The County is also considering a carbon-neutrality goal for the unincorporated areas of the County and has launched a County Climate Collaborative, which brings together staff from various cities, community-based organizations, and institutions across the County to collaborate on sustainability efforts.

⁸ Silicon Valley Clean Energy, EV Infrastructure Joint Action Plan: <https://www.svcleanenergy.org/decarbonization/#>.

⁹ Silicon Valley Clean Energy, Building Decarbonization Joint Action Plan: <https://www.svcleanenergy.org/decarbonization/#>.