

Appendix H:

Opportunities for Energy Conservation



INTRODUCTION

State law (Government Code Section 65583[a][7]) requires Housing Elements to contain an analysis of opportunities for residential energy conservation. According to the California Department of Housing and Community Development (HCD), the energy conservation section of a Housing Element must inventory and analyze the opportunities to encourage energy saving features, energy saving materials, and energy efficient systems and design for residential development.

The City of Santa Monica has long been a progressive leader in sustainable policies and programs. In May 2019, the City made a strong commitment to combating global climate change by adopting its Climate Action and Adaptation Plan (CAAP). The CAAP builds off the City's past success and legacy as a sustainable community, by establishing the goal of achieving carbon neutrality by 2050 or sooner and an interim goal of reducing carbon emissions 80% below 1990 levels by 2030. The CAAP focuses on reducing greenhouse gas emissions in three sectors to reduce emissions: Zero Net Carbon Buildings, Zero Waste, and Sustainable Mobility. As described in the following pages, new housing that is energy efficient in location and design play an important role in the City's efforts to combat climate change.

A. Energy Conservation through Land Use and Transportation Planning

When SCAG adopted its Final RHNA methodology, one of their guiding principles was to promote housing in a manner that would produce more efficient land use patterns, reduce greenhouse gas emissions, and improve overall quality of life. This meant aligning future housing development in urban areas with transportation, jobs, schools and other resources. According to the Urban Land Institute publication *Growing Cooler*, "conserving or developing infill housing within a more urban core has been shown to reduce primary energy consumption an average of 20% per household over newer sprawl developments."

Santa Monica recognized the benefits of creating walkable, mixed-use communities when it adopted its General Plan Land Use and Circulation Element (LUCE) in 2010. The LUCE calls for increased densities around the areas served by the Metro E (Expo) Light Rail and the Big Blue Bus to improve mobility and energy efficiency.

This 6th Cycle Housing Element will continue to promote efficient land use patterns, consistent with the LUCE and SCAG's guiding principles. New housing in proximity to transit and jobs remains an important strategy to meet the City's housing needs and achieve sustainability goals. In addition, this Housing Element Update further promotes the creation of walkable, mixed use neighborhoods by increasing housing opportunities in areas that have historically not accommodated housing.

Santa Monica also takes a proactive approach to reducing energy use from transportation. Under the City's Transportation Demand Management (TDM) Ordinance (Chapter 9.53 of the Santa Monica Municipal Code), developers of projects with 7,500 square feet of floor area, 16 units, or mixed use project with 16 units or more are required to prepare TDM programs for reducing vehicle trips including providing information and incentives on sustainable mobility choices, and enhancements that support walking, biking, and transit.

B. Renewable Energy through the Clean Power Alliance

The City has also made significant progress in its goal for 100% clean energy consumption. In February 2019 for residential customers and May 2019 for non-residential customers, Clean Power Alliance (CPA) became the new electricity supplier for Santa Monica. With this change, CPA purchases electricity from renewable sources and partners with SCE to distribute electricity to residential and commercial customers throughout the City. CPA is a Joint Powers Authority (JPA) made up of public agencies across Los Angeles and Ventura counties working together to bring clean, renewable power to Southern California. With the switch in energy providers, electricity customers in Santa Monica are automatically defaulted to have 100% renewable energy serving their electricity needs. Alternatively, customers can opt to have their electrical power consist of 50% renewable content or 36%, or they can opt out of the CPA and have Southern California Edison be their provider.

According to the City's Office of Sustainability and the Environment, in 2020, 97 percent of Santa Monica customers are being supplied with CPA electricity. Of the total 53,576 CPA customers, 96 percent of residential and 95% of commercial customers are on 100% green power. New housing that is developed in this Housing Element planning period would have the option of receiving all of its energy from clean, renewable resources.

C. Energy Reach Code

The City also mandates energy efficiency, on-site renewable energy, and electric vehicle infrastructure in the design of new buildings. In 2019 the City updated its Energy Code to provide local amendments to Title 24 Part 6 of the California Energy Code and Title 24, Part 11 of the California Green Building Standards Code. The local amendments are part of the City's efforts to achieve carbon neutrality and reduce natural gas emissions through whole-building electrification. The revised Energy Code, which became effective on January 1, 2020, requires new buildings in Santa Monica to achieve one of two design pathways for complying with the City's Energy Code: all-electric design or mixed-fuel design. To incentivize more buildings to be all-electric (which is cost-effective, healthier, and safer while significantly reducing greenhouse gases), the City requires that mixed-fuel building be designed with a higher level of energy efficiency. All-electric buildings would not be subject to higher levels of energy efficiency and may be built to the State's standard design requirements. All-electric buildings powered by a combination of on-site solar and 100 percent Green Power from CPA are effectively Zero-Emission Buildings. The energy requirements for new building types in the City are illustrated in Figure H-1. While the City's Energy Code currently allows for new buildings to choose between an all-electric design or mixed-fuel design, the City anticipates that in the near future, the code will be modified to mandate an all-electric design.

Figure H-1 Energy Code Compliance Pathways

Building Type	Code Compliance Pathways (choose one)	
	All-Electric Design Requirements	Mixed-Fuel Design Requirements
New single-family, duplex, and multi-family residential buildings (3 stories or less)	<p><u>Efficiency</u>: Meet State Code (2019 CEC)</p> <p><u>Solar</u>: No requirement</p>	<p><u>Efficiency</u>: Must meet CalGreen Tier 1 established by the 2019 CEC. CalGreen Tier 1 buildings have additional integrated efficiency and on-site renewable energy sufficient to achieve a Total Energy Design Rating of 10 or less.</p>
New multi-family buildings (4+ stories, & new hotels and motels)	<p><u>Efficiency</u>: Meet State Code (2019 CEC)</p> <p><u>Solar</u>: Solar photovoltaic system with a minimum rating of 2 watts per square foot of the building's footprint.</p>	<p><u>Efficiency</u>: Must be designed to be 5 percent more efficient than the State Code (2019 CEC).</p> <p><u>Solar</u>: Solar photovoltaic system with a minimum rating of 2 watts per square foot of the building's footprint.</p>
All other new non-residential buildings:	<p><u>Efficiency</u>: Meet State Code (2019 CEC)</p> <p><u>Solar</u>: Solar photovoltaic system with a minimum rating of 2 watts per square foot of the building's footprint.</p>	<p><u>Efficiency</u>: Must be designed to be 5 percent more efficient than the State Code (2019 CEC).</p> <p><u>Solar</u>: Solar photovoltaic system with a minimum rating of 2 watts per square foot of the building's footprint.</p>