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City of Sacramento Housing Element

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APPENDIX H-6 | Opportunities for Energy Conservation

6.1 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 term “residential energy” refers to the total energy used in residential buildings, including heating, cooling, and “plug load” from appliances, lights, and electrical devices. “Energy conservation” refers to reducing energy use through using less of an energy service, such as lowering the thermostat in the winter.

Residential energy efficiency can be improved by sealing the building envelope and HVAC ducts; insulating the attic or ceiling, walls, and floor; installing efficient heating and cooling systems; and energy efficient lighting and appliances. Passive heating, cooling, and lighting can also be employed when designing new buildings. Housing type also makes a difference in building energy consumption, with the average multi-unit housing unit using half the energy of an average single-unit detached home.¹ Multi-unit homes tend to be more energy efficient because they tend to be smaller than single-unit detached homes and the shared walls amongst units have a self-insulating effect that create further efficiencies.

In addition to reducing greenhouse gas (GHG) emissions and conserving limited energy resources, reducing residential energy consumption also has economic benefits. Energy conservation measures can result in lower monthly housing costs and contribute to greater long-term housing affordability.

The City is committed to reducing GHG emissions and reaching carbon neutrality by 2045 through a number of initiatives, programs, and planning efforts. These efforts all support the City’s larger climate goals, of which energy efficiency and conservation measures are key components. This appendix chapter describes the ways the City is currently addressing the conservation of energy resources as part of larger climate action and adaptation processes.

6.2 Framework for Conserving Energy Resources

6.2.1 Mayor’s Commission on Climate Change

In June 2020, the Mayors’ Commission on Climate Change completed a two-year effort and issued a comprehensive final report with recommendations on how the cities of Sacramento and West Sacramento can achieve carbon-zero by 2045. The report includes carbon-zero strategies and recommendations for the built environment, mobility, and community health and resiliency.

The built environment strategy includes two recommendations specific to residential energy conservation:

- ❖ **Electrification of New Construction:** Mandate all-electric construction to eliminate fossil-fuel use in new low-rise² buildings by 2023 and all buildings by 2026³.

¹ Location Efficiency and Housing Type: Boiling it Down to BTUs, U.S. EPA and Jonathan Rose Companies. 2011

² Low-rise defined as under 4 stories.

³ Provided that the costs to go all-electric are cost-effective including the incremental costs of electrical infrastructure upgrades and the technology has shown to be feasible.

- ❖ **Electrification of Existing Buildings:** Transition 25 percent of existing residential and small commercial buildings to all electric by 2030.

Section 4.2.4 below, describes the City of Sacramento’s current new building electrification efforts.

6.2.2 2040 General Plan Update

The City is in the process of preparing the 2040 General Plan Update. The 2040 General Plan will guide future development in a manner consistent with the SACOG Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), which emphasizes smart land use, infill development, environmental quality, livability, equity and inclusion, and resiliency and climate action.

The City has adopted a set of Guiding Principles identifying key themes and priorities to set the tone for the General Plan Update including: Sustainable and Responsible Growth; Resiliency and Climate Action; Safety, Equity, Inclusivity, and Justness; Economic Growth; Livability; and Accessibility. The following is a summary of the guiding principles for the City’s efforts towards sustainable responsible growth and resilient climate action:

- ❖ **Sustainable and Responsible Growth:** The 2040 General Plan seeks to concentrate new growth within Sacramento’s existing footprint to promote a compact development pattern. Active transportation such as pedestrian, bicycle and transit options will be prioritized over single-occupant vehicles. The City will continue to cultivate a broad mix of housing types, foster “complete neighborhoods” providing residents’ daily needs within easy walking or biking distance, and promote sustainability through the adaptive reuse of existing buildings as well as the careful conservation of energy, water, open spaces, trees, and other natural resources. Additionally, the City will guide robust investment in utility infrastructure to support sustainable growth with an emphasis on serving disadvantaged communities.
- ❖ **Resiliency and Climate Action:** The City will take bold actions to achieve carbon neutrality by 2045 by facilitating the use of innovative approaches, new technologies, and economic development to reduce per capita energy use, waste, and pollutants. In this effort, the City will prioritize the most vulnerable and underserved communities in developing climate solutions and take action to build resilience on all levels. The City plans to develop infrastructure to support zero emission transportation and provide viable options for lower-income households. Ultimately, the City will be proactively preparing for the effects of climate change by collaborating across City departments and public agencies to effectively address environmental hazards and promote environmental health and resilience throughout the community.

6.2.3 Sacramento Climate Action and Adaptation Plan

In coordination with recommendations from the Mayor’s Commission on Climate Change, the City of Sacramento is currently (2020) updating the Sacramento Climate Action and Adaptation Plan (CAAP) in tandem with the 2040 General Plan Update process. The City first adopted a Climate Action Plan (CAP) in February 2012 to reduce GHG emissions and adapt to climate change.

The CAAP will include strategies, measures, and actions for reducing community wide GHG emissions to 40 percent below 1990 levels by 2030 and achieve carbon neutrality by 2045. To reach these climate action targets, including carbon neutrality by 2045, the CAAP will include various programs and implementation measures specific to each emission sector. Key measures in the CAAP that will reduce GHG emissions association with energy use in the built environment include:

- ❖ Eliminate natural gas in new construction by developing and adopting an electrification ordinance that requires all new construction under four stories to be all-electric by 2023 and all construction to be all-electric by 2026⁴;
- ❖ Gradually transition existing buildings away from natural gas to electric and assist low-income residents by offering financial incentives;

⁴ Ibid.

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- ❖ Increase the amount of electricity produced from local resources and work with Sacramento Metropolitan Utility District (SMUD) to install 246 MWh local energy storage by 2030; and
- ❖ Support infill growth to ensure that 90 percent of growth is in the established and center/corridor communities and 90 percent small-lot and attached homes by 2040, consistent with the regional Sustainable Communities Strategy. Project-level vehicle miles traveled (VMT) should be 15 percent below (or 85 percent of) the regional average.

6.2.4 Energy Efficiency Building Requirements

Title 24, Part 6, of the California Code of Regulations (Building Energy Efficiency Standards for Residential and Nonresidential Buildings) contains California's building standards for energy efficiency. These regulations respond to California's energy crisis and need to reduce energy bills, increase energy delivery system reliability, and contribute to an improved economic condition for the state. Each city and county must enforce these standards as part of its review of building plans and issuance of building permits. The standards, prepared by the California Energy Commission, were established in 1978 in response to a State legislative mandate to reduce California's energy consumption. The standards are updated periodically to consider and incorporate new energy efficiency technologies and methods.

The 2019 California Building Code (including Title 24, Part 6, described above) went into effect in the City on January 1, 2020, see Chapter 15.04 of the City's Code. All new construction must comply with the standards in effect on the date a building-permit application is submitted.

The California Building Code also includes green building regulations, referred to as CALGreen, to encourage more sustainable and environmentally friendly building practices, require low pollution emitting substances that can cause harm to the environment, conserve natural resources, and promote the use of energy efficient materials and equipment. There are mandatory measures, which apply statewide, and voluntary measures, which can be adopted locally. Voluntary measures are organized into 2 tiers with their own respective prerequisites and elective measures: Tier 1 prerequisites set a higher baseline than CALGreen mandatory measures while Tier 2 prerequisites include all of Tier 1 prerequisites plus some enhanced or additional measures.

Sacramento Building Electrification Ordinance

Following the passage of SB100, which mandates that California utilities provide carbon-neutral electricity by 2045, local governments began passing ordinances that are variations on the theme of prohibiting fossil fuel energy sources in new construction.

Decarbonization through electrification is one of the key strategies for reducing GHG emissions highlighted both in the Mayor's Commission on Climate Change Final Report and the City's CAAP. In order for Sacramento to reach carbon neutrality, the majority of the buildings in the City will need to be carbon neutral. All-electric buildings have been shown to be cost-effective for new construction and the electrification of new low-rise residential construction is expected to reduce the overall cost to build new housing. Avoiding the cost of gas infrastructure provides significant savings, and most electric appliances have similar or lower operating costs compared to natural gas appliances.

In August 2020, the City Council directed staff to begin the process of adopting an ordinance that would make local amendments to the California Building Standards Code requiring all new low-rise construction of three stories or less to be all-electric by 2023 and all new buildings of four-stories or more to be all-electric by 2026 (provided that all-electric high-rise construction has been determined to be cost-effective and the technology has shown to be feasible). Electrification allows buildings to use 100 percent carbon neutral electricity.

The City also anticipates making a local amendment to the Building Code to require 20 percent electric vehicle (EV) capable charging spaces and at least one installed, operational Level 2 EV charger in new low-rise multi-unit and nonresidential development (three stories or less) by 2023, and all building by 2026. Adding EV capacity requirements in new construction is also cost effective when compared to the cost of retrofitting to add EV capacity later. The electrification of new construction will have the co-benefit of improving indoor and outdoor air quality.

6.3 Energy Efficiency and Conservation Programs

This Section briefly describes some of the potential ways to achieve energy savings through the regulations and programs of the City, the State, local utility providers, and the Sacramento Housing and Redevelopment Agency (SHRA).

6.3.1 Green Energy Financing and PACE Programs

The City has currently authorized four Property Accessed Clean Energy (PACE) programs to provide financing to property owners in City limits:

- 1) Ygrene PACE programs, operating through the Golden State Financing Authority and the City of Sacramento Clean Energy Community Facilities District;
- 2) the California Statewide Communities Development Authority Open PACE programs;
- 3) the California HERO Program; and
- 4) the California Municipal Finance Authority PACE Program.

These programs are available to help residents and businesses save energy and water while improving the quality of their home or building. Many of these programs offer financing options or offset the costs of upgrades such as improvements to mechanical and electrical systems, installation of water-efficient fixtures, and development of onsite renewable energy and electric vehicle charging. Financing is repaid via the property owner's tax bill over a period of time. Eligible improvements may vary by PACE program, but generally include improvements for energy and water efficiency, distributed generation renewable energy facilities such as solar photovoltaics, and vehicle charging.

6.3.2 Home Energy Conservation Program

SHRA provides financial assistance to its partner, Rebuilding Together, to implement the Home Energy Conservation Program. The program provides weatherization and minor energy efficiency improvements at no cost to eligible low-income homeowners. The program can help lower a homeowner's utility bill by as much as 10-20 percent and can reduce GHG emissions by up to 1 ton per home annually. This program is implemented as a partnership between Rebuilding Together Sacramento, Sacramento Association of Realtors Foundation, and the Sacramento Metropolitan Air Quality Management District.

6.3.3 Local Utility Programs

SMUD provides electricity services and Pacific Gas and Electric (PG&E) provides gas services for the City. Both utilities offer a variety of programs to increase energy conservation and reduce monthly energy costs for lower-income households.

Sacramento Municipal Utility District

SMUD offers rebates, special promotions, and home-improvement loans to assist residential customers with energy efficiency upgrades and improvements. For new construction, SMUD offers design and technical assistance for incorporating energy efficiency features as well as technical and financial assistance for design, construction and remodeling of housing. SMUD's Home Performance Program helps residents reduce energy use by evaluating a home's current energy use and recommending home improvements. SMUD has programs to incorporate advanced systems such as photovoltaic roof panels and ground source heat pumps into new projects. Design assistance is available for retrofit projects.

SMUD also offers reduced electricity rates through the Energy Assistance Program Rate (EAPR) for customers that qualify as low-income. The reduction is based on income levels compared to the Federal Poverty Level (FPL). EAPR customers with a household income at or below the FPL would receive the largest monthly discounts (up to \$60 per month in 2020). EAPR customers with a household income between 100 percent and 200 percent of the FPL would receive smaller discounts (up to \$20 per month in 2020). SMUD also offers reduced electricity rates for customers that require an electrically powered medical equipment. The reduction is equal to \$15 off each monthly bill.

Pacific Gas and Electric

PG&E offers the following financial and energy-related assistance programs for its low-income customers:

- ❖ **Energy Savings Assistance Program.** PG&E's Energy Savings Assistance program offers free weatherization measures and energy-efficient appliances to qualified low-income households. PG&E determines qualified households through the same sliding income scale used for CARE. The program includes measures such as attic insulation, weather stripping, caulking, and minor home repairs. Some customers qualify for replacement of appliances including refrigerators, air conditioners, and evaporative coolers.
- ❖ **Energy Efficiency for Multifamily Properties.** The Energy Efficiency for Multifamily Properties program is available to owners and managers of existing multifamily residential dwellings containing five or more units. The program encourages energy efficiency by providing rebates for the installation of certain energy-saving products.
- ❖ **California Alternate Rates for Energy (CARE).** PG&E offers this rate reduction program for low-income households. PG&E determines qualified households by a sliding income scale based on the number of household members. The CARE program provides a discount of 20 percent or more on monthly energy bills.
- ❖ **REACH (Relief for Energy Assistance through Community Help).** The REACH program is sponsored by PG&E and administered through a non-profit organization. PG&E customers can enroll to give monthly donations to the REACH program. Qualified low-income customers who have experienced uncontrollable or unforeseen hardships, that prohibit them from paying their utility bills may receive an energy credit. Eligibility is determined by a sliding income scale based on the number of household members. To qualify for the program, the applicant's income cannot exceed 200 percent of the Federal poverty guidelines.
- ❖ **Medical Baseline Allowance.** The Medical Baseline Allowance program is available to households with certain disabilities or medical needs. The program allows customers to get additional quantities of energy at the lowest or baseline price for residential customers.

6.3.4 Federal and State Energy Assistance Programs

In addition to the local programs described above, the California Department of Community Services and Development (CSD) administers the Federally funded Low-Income Home Energy Assistance Program (LIHEAP). This program provides two types of assistance: Home Energy Assistance and Energy Crisis Intervention. The first type of assistance is a direct payment to utility bills for qualified low-income households. The second type of assistance is available to low-income households that are in a crisis. CSD also offers free weatherization assistance, such as attic insulation, caulking, water heater blankets, and heating and cooling system repairs to low-income households.

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