Appendix H3

Opportunities for Energy Conservation

City of Morgan Hill Housing Element 2023-2031

Table of Contents

City of Morgan Hill Housing Element

APPENDIX H-3 | Opportunities for Energy Conservation

3.1 Introduction

California law (Government Code Sections 65583(a)(8)) 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 or raising the thermostat in the summer.

Housing and energy efficient, resilient, and healthy buildings are key components for achieving community vitality and serving the needs of residents. Energy efficient buildings increase occupant health by reducing infiltration of moisture, pests, or air pollution. They increase comfort and decrease utility bills. In the case of existing buildings, this can help prevent residents from having utilities turned off due to inability to pay or resorting to unsafe practices for heating a home, such as relying on gas ovens. Energy efficient housing is also more resilient to climate change, preventing infiltration of wildfire smoke and keeping homes thermally comfortable during extreme heat events.

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 of Morgan Hill has a central goal of reducing GHG emissions and reaching carbon neutrality by 2045 and is committed to reaching this goal through a number of goals, action items, and planning efforts identified in the Morgan Hill 2021 Climate Action Plan. Energy efficiency and conservation measures are key components of these efforts. Energy conservation can help achieve the City's goal for carbon neutrality by both reducing use of natural gas, which will reduce emissions, and reducing use of electricity, which will reduce demand on the grid and increase

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

reliability. In addition, energy conservation reduces residents' energy costs and makes their homes more comfortable, healthy, and resilient. Using electricity instead of natural gas to fuel homes can also help to reduce climate impacts and improve health. Housing needs to be constructed expeditiously in order to address the housing crisis; however, if it is not built to also address the climate crisis, it will be challenging for jurisdictions and the State to meet aggressive climate goals. This Energy Conservation appendix describes the ways the City is currently addressing the conservation of energy resources as part of larger climate action and adaptation processes.

3.2 Framework for Conserving Energy Resources

3.2.1 2035 General Plan Update

The City of Morgan Hill adopted the 2035 General Plan on July 27, 2016, which includes a set of policies and actions within the Natural Resources and Environment Element, with an overall goal to conserve energy resources, that guides future development in an effort to reduce the City's greenhouse gas (GHG) emissions. The following is a summary of residential conservation of energy resources policies and actions from the City's 2035 General Plan:

Policy NRE-16.1 **Energy Standards for New Development.** New development, including public buildings, should be designed to exceed State standards for the use of energy.

Policy NRE-16.2 **Energy Conservation.** Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.

Policy NRE-16.3 **Energy Use Data and Analysis.** Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.

Policy NRE-16.4 **Retrofit Financing.** Promote existing and support development of new private financing options for building retrofits and renewable energy development.

Policy NRE-16.5 **Energy Efficiency.** Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.

Policy NRE-16.6 **Landscaping for Energy Conservation.** Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.

Policy NRE-16.7 **Renewable Energy.** Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

Policy NRE-16.9 **Subdivision Design.** In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that

provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.

Action NRE-16.A **Community Choice Aggregation.** Partner with other Santa Clara County jurisdictions to determine the feasibility for development of a regional CCA program, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities.

Action NRE-16.C **Local Energy Ordinances.** Develop local ordinances that promote energy conservation and efficiency. Examples of such ordinances include: energy audits, solar access, solar swimming pool heating, insulation and solar retrofit, and solar water heating.

3.2.2 Morgan Hill 2021 Climate Action Plan

The City of Morgan Hill is invested in preparing a resilient future for our community and the environment overall. The Morgan Hill 2021 Climate Action Plan (CAP) was developed out of the urgency that the City Council saw to address climate change and focus efforts toward the initiatives that will make the most significant positive impacts in the most timely manner. Thus, it was determined that a limited CAP be developed with a focus on reducing greenhouse gas emissions in the transportation and building sectors. The strategies in the CAP focus on areas of decarbonizing buildings and reducing emissions from on-road and off-road vehicles by increasing electric vehicles and electric equipment to reach net zero emissions.

The main goal of the CAP is to reduce Morgan Hill's net CO2 emissions in the building and transportation sectors 35% below the 2020 baseline level by 2030 and 100% below the 2020 baseline level by 2045.

The residential sub-goals of the CAP include the following:

1. Expand electric vehicle charging station access for existing multi-family complexes by 30%, (i.e., the number of chargers in multi-family complexes will be equivalent to at least 30% of the number of units in multi-family complexes) by the year 2025 and 100% by 2035.

2. Require newly-constructed residential buildings to have the necessary capacity to facilitate electric vehicle charging.

3. Transition 95% of existing buildings in Morgan Hill to be all-electric by 2045, with additional targets every five years consisting of:
    - 1% of existing buildings by 2025
    - 10% of existing buildings by 2030
    - 35% of existing buildings by 2035
    - 70% of existing buildings by 2040

3.2.3 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 15.08 (Building Code) of the City's Municipal Code. All new construction must comply with the standards in effect on the date a building-permit application is submitted.

The California Green Building Standards Code, within Title 24, Part 11, of the California Code of Regulations, includes green building regulations, also referred to as the CALGreen Code, 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.

Prohibition of Natural Gas Infrastructure in New Buildings Ordinance

Following the passage of Senate Bill (SB) 100, 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. In order for Morgan Hill 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 residential construction is expected to reduce the overall cost to build new housing. Avoiding the cost of gas infrastructure provides significant savings (approximately $7,000 per unit), and most electric appliances have similar or lower operating costs compared to natural gas appliances.

In November 2019, the City Council adopted Ordinance 2306 establishing Chapter 15.63 (Prohibition of Natural Gas Infrastructure in New Buildings) requiring all new buildings (residential, commercial, and industrial), after March 1, 2020, to be all-electric. Electrification allows buildings to use 100 percent carbon neutral electricity.

3.3 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, and local utility providers.

3.3.1 Rehabilitation Program, Minor Home Repair

Morgan Hill has established a minor home repair rehabilitation program that was operational during the entire previous Housing Element cycle. This fund was initially established by a one-time developer contribution and was intended to be used for senior housing-related support services. The Housing Division in the past contracted with the non-profit, Rebuilding Together of

Silicon Valley (Rebuilding Together) to administer and manage a rehabilitation program funded by the Senior Housing Trust. Rebuilding Together has been providing the South County with home repair service for thirty years and provides a "lifeline" Home Repair Rehab Program for fixed income seniors in Morgan Hill, as well as lower income tenants. The original fund has been exhausted and this program is now funded by the Community Development Block Grant for which Morgan Hill participates through a Joint Powers Agreement with the County of Santa Clara. Through this Rehabilitation Program, the City of Morgan Hill rehabilitated 169 units from 2015 through 2021, administered by Rebuilding Together.

3.3.2 Local Utility Programs

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 multi-family 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. Approximately 16.8% of Morgan Hill customers/households are enrolled in the CARE program.

- **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.

Santa Clara Valley Water District

The Santa Clara Valley Water District (Valley Water) offers the following financial and energy-related assistance programs for residents:

- **Landscape Rebate Program.** This program is designed to encourage residents to convert approved high-water use landscape, such as lawns and pools, to low-water use landscape, as well as to retrofit existing irrigation equipment with approved high-efficiency irrigation equipment. Valley Water's Landscape Rebate Program offers four rebate categories that can help save water:
  - Landscape Conversion Rebate
  - In-Line Drip Irrigation Conversion Rebate
  - Irrigation Equipment Upgrade Rebate
  - Rainwater Capture Rebate

- **Graywater Rebate.** Through Valley Water's Graywater Rebate Program, rebates are offered to residents who install a Graywater Laundry-to-Landscape System.

- **Submeter & Private Well Rebates.** Valley Water offers rebates for installing qualifying submeters and water meters.

3.3.3 Federal and State Energy Assistance Programs

California Department of Community Services and Development (CSD)

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.

The California Arrearage Payment Program (CAPP) is a state program to help pay customers' eligible past due energy bills that increased during the COVID-19 pandemic. CAPP reduces qualified customers' unpaid energy bills by directly applying a bill credit to their energy bill. Customers do not need to apply for CAPP and assistance will be disbursed by state utility companies electing to participate in CAPP. CAPP bill credits are courtesy of the State of California and are targeted to help utility customers that fell behind on their energy bills because of the economic impacts of the COVID-19 pandemic. Customers may qualify for a CAPP credit if they had an unpaid energy utility bill over 60 days past due incurred between March 4, 2020 and June 15, 2021.

The new federal Low Income Household Water Assistance Program (LIHWAP) will provide financial assistance to low-income Californians to help manage their residential water utility costs. Established by Congress in December 2020, this federally funded program will help low-income households pay down their outstanding water bills. California has been allocated $116 million in one-time funding to provide LIHWAP assistance. The Department of Community Services and Development (CSD) has been designated the administering agency for LIHWAP in California. CSD, in consultation with stakeholders, is in the process of defining the scope of the LIHWAP

program and service delivery through the development of a LIHWAP State Plan. The U.S. Department of Health and Human Services, Office of Community Services, has provided guidance that LIHWAP should be modeled on existing processes, procedures, policies, and systems in place to provide assistance, such as the CSD administered Low-Income Home Energy Assistance Program (LIHEAP).

Solar on Multifamily Affordable Housing (SOMAH)

The Solar on Multifamily Affordable Housing (SOMAH) Program provides financial incentives for installing photovoltaic (PV) energy systems on multi-family affordable housing in California. The program will deliver clean power and credits on energy bills to hundreds of thousands of the state's affordable housing residents. SOMAH's unique, community-based approach ensures long-term, direct financial benefits for low-income households, helps catalyze the market for solar on multi-family housing and creates jobs. The SOMAH Program is overseen by the California Public Utilities Commission.

Self-Generation Incentive Program (SGIP)

The Self-Generation Incentive Program (SGIP) is a California Public Utilities Commission (CPUC) program that offers rebates for installing energy storage technology in a home. These storage technologies include battery storage systems that can function in the event of a power outage. Any PG&E customer can apply for this program to receive a rebate that is 15-20% of the average battery cost. Medical Baseline customers and customers who reside in affordable housing could receive a rebate that is 85-100% of the average battery cost.