

7. ENERGY

This chapter describes the existing energy resources in the General Plan Planning Area.

7.1 REGULATORY FRAMEWORK

7.1.1 FEDERAL REGULATIONS

7.1.1.1 Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions to increase energy efficiency and availability of renewable energy. This Act includes requirements for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliances and equipment.

7.1.1.2 Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings; fossil fuel production and clean coal facilities; and construction and operation of nuclear power plants; among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

7.1.1.3 National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and State and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

7.1.1.4 Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation (DOT) to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases, as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the DOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system. These regulations governing natural gas transmission pipelines, facility operations, employee activities, and safety are found at 49CFR Parts 190 through 192, 49CFR Part 195, and 49CFR Part 199.

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7.1.1.5 Pipeline Safety Improvement Act of 2002

The Pipeline Safety Improvement Act mandates that the DOT, the Department of Energy (DOE), and the National Institute of Standards and Technology (NIST) in the Department of Commerce carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities.¹ The purpose of the R&D Program is to identify safety and integrity issues and develop methodologies and technologies to characterize, detect, and manage risks associated with natural gas and hazardous liquid pipelines.

7.1.1.6 Pipeline Inspection, Enforcement, and Protection Act of 2006

The Pipeline Inspection, Enforcement, and Protection (PIEP) Act confirms the commitment to the Integrity Management Program and other programs enacted in the Pipeline Safety Improvement Act of 2002. The 2006 legislation includes provisions on:

- Preventing excavation damage to pipelines through the enhanced use and improved enforcement of State “One-Call” laws that preclude excavators from digging until they contact the State One-Call system to locate the underground pipelines;
- Minimum standards for Integrity Management Programs for distribution pipelines (including installation of excess flow valves on single family residential service lines based on feasibility and risk);
- Standards for managing gas and hazardous liquid pipelines to reduce risks associated with human factors (e.g., fatigue);
- Authority for the Secretary to waive safety standards in emergencies;
- Authority for the Secretary to assist in restoration of disrupted pipeline operations;
- Review and update incident reporting requirements;
- Requirements for senior executive officers to certify operator integrity management performance reports; and,
- Clarification of jurisdiction between states and PHMSA for short laterals that feed industrial and electric generator consumers from interstate natural gas pipelines.²

¹Pipeline and Hazardous Materials Safety Administration, October, 2017. Pipeline Safety Improvement Act of 2002. <https://www.phmsa.dot.gov/pipeline/congressional-mandates/pipeline-safety-improvement-act-2002>

² Interstate Natural Gas Association of America, 2019, *The Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006*. <https://www.ingaa.org/Pipelines101/143/861/851.aspx>.

7.1.1.7 Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011

The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 was designed to examine and improve the state of pipeline safety regulation. This Act accomplishes the following:

- Reauthorizes PHMSA's federal pipeline safety programs through fiscal year 2015.
- Provides the regulatory certainty necessary for pipeline owners and operators to plan infrastructure investments and create jobs.
- Improves pipeline transportation by strengthening enforcement of current laws and improving existing laws where necessary.
- Ensures a balanced regulatory approach to improving safety that applies cost-benefit principles.
- Protects and preserves Congressional authority by ensuring certain key rulemakings are not finalized until Congress has an opportunity to act.³

7.1.2 STATE REGULATIONS

7.1.2.1 California Energy Commission

The California Energy Commission (CEC) was created in 1974 as the State's principal energy planning organization. In addition to updating the State's Building Code, The CEC is charged with six basic responsibilities:

- Forecast statewide electricity needs
- License power plants to meet those needs
- Promote energy conservation and efficiency measures
- Develop renewable energy resources and alternative energy technologies
- Promote research, development, and demonstration
- Plan for and direct the state's response to energy emergencies

7.1.2.2 California Public Utilities Commission

The California Public Utilities Commission (CPUC) is the state agency that regulates privately owned electric, natural gas, telecommunications, water, and transportation companies. Key mandates of the CPUC include: regulating changes in utility rates, conducting safety oversight, regulating electric power procurement and generation, and administering rate payer funded energy efficiency and renewable energy programs.

³ Pipeline and Hazardous Materials Safety Administration, March 2019, *Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011*. <https://www.phmsa.dot.gov/legislative-mandates/pipeline-safety-act/pipeline-safety-regulatory-certainty-and-job-creation-act>

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In September 2008, the CPUC adopted the *Long Term Energy Efficiency Strategic Plan*, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020⁴;
- All new commercial construction in California will be zero net energy by 2030;
- Heating, ventilation, and air conditioning commonly referred to as “HVAC” will be transformed to ensure that its energy performance is optimal for California’s climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the *Long Term Energy Efficiency Strategic Plan* notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector’s five billion-plus square feet of space accounts for 38 percent of the State’s power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of the State’s electricity and gas use.

The CPUC and the CEC have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1.** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2.** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3.** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

7.1.2.3 California Building Code: Building Energy Efficiency Standards

The State provides a minimum standard for energy conservation through Part 6 of Title 24 of the California Code of Regulations, commonly referred to as the “California Energy Code”. The California Energy Code was originally adopted in June 1977 and is updated by the CEC on a three-year cycle. Title 24 requires the design of building shells and building components to conserve energy. The 2019 California Energy Code is the most recent version and improves upon the previous 2016 standards for new

⁴ Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements.⁵ Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient.⁶ When accounting for the electricity generated by the solar photovoltaic system, single-family homes will use 53 percent less energy compared to homes built to the 2016 standards.⁷

7.1.2.4 California Building Code: CALGreen

The California Building Standards Commission adopted the California Green Building Standards Code, also known as CALGreen, in Part 11 of Title 24. CALGreen establishes standards that apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the state, unless otherwise indicated in the California Building Standards Code. The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings. CALGreen encourages sustainable construction practices in energy efficiency. Compliance with the CALGreen Code is not a substitution for meeting the certification requirements of any green building program. The City of Hollister regularly adopts each new CBC update under the Hollister Municipal Code (HMC) Title 15, Buildings and Construction, Section 15.04.050, Construction Codes Adopted by Reference.

7.1.2.5 2019 Appliance Efficiency Regulations

The 2019 Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1609) include standards for both federally regulated appliances and non-federally regulated appliances. There are 24 categories of appliances included in the scope of these regulations including such devices as washing machines, microwave ovens, dishwashers, and furnaces. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states and they reduce greenhouse gas (GHG) emissions by reducing energy demand.

⁵ California Energy Commission, 2018, News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation, <https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first>, accessed April 24, 2020.

⁶ California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, https://ww2.energy.ca.gov/title24/2019standards/documents/Title24_2019_Standards_detailed_faq.pdf, accessed April 24, 2020.

⁷ California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, https://ww2.energy.ca.gov/title24/2019standards/documents/Title24_2019_Standards_detailed_faq.pdf, accessed April 24, 2020.

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7.1.2.6 Green Building Executive Order

In 2012, EO B-18-12 was signed by Governor Brown, committing the state to take aggressive action to reduce GHG emissions and energy usage from State buildings and operations. The Executive Order requires State agencies, departments, and other entities under the direct executive authority of the Governor to cooperate to reduce statewide GHG emissions by at least 10 percent by 2015 and 20 percent by 2020. It also requires all new State buildings to be net zero by 2025 and for 50 percent of the existing square footage area of State-owned facilities to be net zero by 2025.

The Executive Order also mandates specific measures in order to reduce emissions and energy usage:

- Installing on-site power generation and clean back-up power during new or major renovation of state buildings larger than 10,000 square feet;
- Designing, constructing and operating new and renovated State-owned or built-to-suit leased facilities over 10,000 square feet as “LEED Silver” or higher certified buildings;
- Reducing grid-based energy purchases from State-owned operations by at least 20% by 2018, as compared to a 2003 baseline;
- Identifying the most appropriate financing and project delivery mechanisms to achieve these goals; and
- Purchasing and using environmentally preferable products that have a lesser or reduced effect on human health and the environment

7.1.2.7 Renewables Portfolio Standard (Senate Bills 1078 and 100)

Established in 2002 under Senate Bill (SB) 1078 and accelerated by several laws, most recently SB 100 in 2018, California's Renewables Portfolio Standard obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from eligible renewable energy sources by 2020, 60 percent from eligible renewable energy sources by 2030, and 100 percent from eligible renewable energy or other carbon-free sources by 2045. SB 100 establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under SB 100, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

7.1.2.8 Senate Bill 1368

On September 29, 2006, SB 1368 was signed into law.⁸ This law limits long-term investments in baseload generation by the State's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

⁸ Perata, Chapter 598, Statutes of 2006.

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds of carbon dioxide (CO₂) per megawatt-hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the California Energy Commission website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact; and
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard.⁹

7.1.2.9 California Energy Benchmarking and Disclosure

AB 1103 (2007) requires that electric and gas utilities maintain records of the energy consumption data of all nonresidential buildings to which they provide service, and that by January 1, 2009, upon authorization of a nonresidential building owner or operator, an electric or gas utility shall upload all of the energy consumption data for the specified building to the United States Environmental Protection Agency Energy Star Portfolio Manager in a manner that preserves the confidentiality of the customer. This statute further requires a nonresidential building owner or operator to disclose Energy Star Portfolio Manager benchmarking data and ratings for the most recent 12-month period to a prospective buyer, lessee, or lender. Enforcement of the latter requirement began on January 1, 2014.

On October 8, 2015, the Governor signed AB 802 which directed the CEC to establish a statewide energy benchmarking and disclosure program and enhanced the CEC's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning and program design. Among the specific provisions, AB 802 requires utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. AB 802 also requires each utility, upon the request and the written authorization or secure electronic authorization of the owner, owner's agent, or operator of a covered building, as defined, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager, subject to specified requirements. Finally, AB 802 requires owners of large commercial and multifamily buildings of over 50,000 sq ft to report their energy use on a yearly basis by June 1st.

7.1.2.10 Senate Bill 350

SB 350, signed into law on October 7, 2015, expanded the California Renewables Portfolio Standard by establishing a renewable energy goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of

⁹ Perata, Chapter 598, Statutes of 2006.

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energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also required the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provided for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

7.1.2.11 California Environmental Quality Act

Recent case law has clarified the requirements to satisfy Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F, Energy Conservation, holding that an environmental document must quantify energy use during construction and operations, including energy associated with transportation involved with the project, and also consider the availability of measures to reduce reliance on fossil fuels.¹⁰ Mere reliance on compliance with the California Building Code and other green building requirements is not sufficient to meet an agency's burden under CEQA Guidelines Appendix F and Public Resources Code Section 21100(b)(3); an agency must also consider, where appropriate, whether a building should be constructed at all, how large it should be, where it should be located, and whether it should incorporate renewable energy resources.

7.1.2.12 AB 1493 Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in from the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards resulted in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards resulted in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will clean up gasoline and diesel-

¹⁰ *California Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173.

powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

7.1.2.13 State Greenhouse Gas Regulations

The following regulations describe the current State of California guidance and goals for reduction of GHG emissions. Many of the regulations for GHG reductions focus on decreasing energy use through increasing energy efficiency, fuel efficiency, and land use patterns that discourage single occupancy vehicles. The following regulations create a nexus between energy and GHG emissions or transportation:

- **Executive Order S-03-05 (EO S-03-05).** Signed June 1, 2005, EO S-03-05 GHG reduction targets for the State: 2000 levels by 2010; 1990 levels by 2020; and 80 percent below 1990 levels by 2050.
- **The Global Warming Solutions Act.** This Act, also referred to as Assembly Bill (AB) 32, was passed by the California state legislature on August 31, 2006, to place the State on a course to reduce its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05.
- **CARB Scoping Plan.** In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012. This CARB scoping plan is updated every five years and major elements of the 2017 Scoping Plan framework include implementing Mobile Source Strategy, the Low Carbon Fuel Standard, and implementation of SB 350.
- **Sustainable Communities and Climate Protection Act.** In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted with the intent to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles travelled commonly referred to as “VMT” and vehicle trips.
- **Executive Order B-30-15 (EO B-30-15).** Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the State to 40 percent below 1990 levels by year 2030. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, to ensure climate change is accounted for in State planning and investment decisions.
- **Senate Bill 32.** In September 2016, SB 32 (California Health and Safety Code Section 38566) was signed into law and made the EO B-30-15 goal for year 2030 into a statewide mandated legislative target.
- **Senate Bill 1383.** On September 19, 2016, SB 1383 was signed into law to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants. SB 1383 establishes targets for reducing organic waste in landfills.

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- **Executive Order B-55-18.** Signed September 10, 2018, Executive Order B-55-18 to Achieve Carbon neutrality established a new statewide goal of reaching carbon neutrality no later than 2045.

7.1.3 LOCAL REGULATIONS

7.1.3.1 2005 City of Hollister General Plan

The City of Hollister 2005 General Plan includes goals, policies, and implementation measures related to energy in the Land Use (LU), Housing (H), and Natural Resources and Conservation (NRC), Elements. As part of the proposed project, some existing General Plan goals, policies, and implementation measures would be amended, substantially changed, or new policies would be added. A list of policies applicable to energy is provided in Table 7-1 below.

TABLE 7-1 2005 HOLLISTER GENERAL PLAN RELEVANT ENERGY POLICIES

Policy No.	Policy
LU9.2	Energy Efficiency. Integrate good design with the use of energy efficient techniques and equipment and with materials and construction practices that minimize adverse environmental effects.
H2.4	Resource Conservation. Promote development and construction standards that provide resource conservation by encouraging housing types and designs that use cost effective energy conservation measures and fewer resources (water, electricity, etc.) and therefore cost less to operate over time, supporting long-term housing affordability.
H2.5	Renewable Energy Technologies. Promote the use of renewable energy technologies (such as solar and wind) in new and rehabilitated housing when possible.
NRC3.1	Development Practices to Conserve Resources. Promote development practices, which will result in the conservation of energy, water, minerals and other natural resources, and promote the use of renewable energy technologies (such as solar and wind) when possible.
NRC3.2	Resource-Efficient Organizations and Businesses. Encourage businesses, commercial property owners, apartment building owners and non-profit organizations to be resource, energy and water efficient.
NRC3.3	Resource Efficiency in Site Development. Encourage site planning and development practices that reduce energy demand, support transportation alternatives and incorporate resource- and energy-efficient infrastructure.
NRC3.4	Resource-Efficient Building Design. Promote and encourage residences to be resource, energy and water efficient by creating incentives and removing obstacles to promote their use. Require those proposing new development to incorporate energy conservation measures in the design and construction of all proposed residential, commercial, industrial and public buildings. This would include: <ol style="list-style-type: none"> 1. High-efficiency heating-ventilation-air conditioning (HVAC) systems for maximum energy efficiency; 2. Design window systems to reduce thermal gain during warm weather and heat loss during cool weather; and, 3. Install high-efficiency sodium lamps for all street and parking lot lighting.
NRC3.5	Efficiency in Government. Promote and serve as an effective leader in implementing conservation practices and incorporating resource-efficient alternatives in government facilities and services.
NRC3.6	Energy-Efficient Transportation Programs. Encourage the creation of programs such as Transportation Systems Management (TSM), public transit, carpools/vanpools, ride-match, bicycling, and other alternatives to the energy inefficient use of vehicles.

Source: City of Hollister, 2005 *General Plan*.

In addition to the policies listed in Table 7-1 above, the 2005 General Plan includes several implementing measures which promote energy conservation strategies. These include implementing measures H.Q and NRC.E which encourage green building standards to increase energy conservation in new development. Implementing measures H.AA and NRC.Q encourage the promotion of energy conservation programs to the public. Implementing measures H.FF and NRC.J require that the City either meet or exceed the CCR

Title 24 energy conservation requirements. Implementing measures H.TT and NRC.P promote the use of solar energy, particularly through developing design standards related to solar orientation. NRC.C, NRC.S, and NRC.W encourage both the City and PG&E to review project proposals for energy conservation opportunities. Implementing measure NRC.O encourages developers to use the Leadership in Energy and Environmental Design standards.

7.1.3.2 Hollister Municipal Code

Besides the General Plan, the Hollister Municipal Code (HMC) is the primary tool that regulates energy in the city. The HMC contains all ordinances for the city, and includes general provisions which promote the use of energy efficient design and construction methods to reduce energy consumption. Most provisions related to energy are in Title 13, Public Services, and Title 17, Zoning, as follows:

- **Chapter 13.32, *Community Choice Aggregation Program*** authorizes the implementation of a Community Choice Aggregation through the Central Coast Community Energy Authority (previously known as Monterey Bay Community Power).
- **Section 17.16.090, *Lighting (Outdoors)*** promotes use of energy efficient lighting.
- **Section 17.16.120, *Solar Energy Development Standards*** provides regulations on the location of solar panels and collector locations.

The HMC additionally includes several sections in which development is required to be oriented in such a way to increase energy efficiency.

7.2 EXISTING CONDITIONS

This section describes energy on a State, regional, and local level. This section provides an overview of the State's energy sources and energy providers, existing infrastructure, and source of energy in the General Plan Planning Area, and how energy supply will evolve over time.

7.2.1 CALIFORNIA'S ENERGY SUPPLIES

In 2018 (which is the most recent year for which comprehensive data is available), California's power mix supply of electricity was derived from the following sources: natural gas (34.91 percent), renewables (31.36 percent), "large" hydroelectric (10.68 percent), nuclear (9.05 percent), coal (3.30 percent), and other/unspecified (10.70 percent).¹¹ Electricity demand in the State is forecast to increase an average of 1.27 percent annually from 2016 through 2030, even with the ongoing adoption of increasingly aggressive building and appliance energy efficiency standards and programs.¹² However, the State of California is

¹¹ California Energy Commission, Energy Almanac, Total Electricity System Power.

http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html, accessed on April 14, 2020.

¹² California Energy Commission, 2018, Tracking Progress, Statewide Energy Demand (CED 2017 Revised Mid Energy Demand scenario), https://www.energy.ca.gov/sites/default/files/2019-12/statewide_energy_demand_ada.pdf, accessed on April 14, 2020.

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actively working to reduce, and ultimately end, reliance on coal-fired electricity generation, a significant emitter of GHG emissions.¹³

In 2017, nearly 45 percent of the natural gas burned in California was used for electricity generation, with much of the remainder consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors. California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply.¹⁴ While the demand for natural gas is anticipated to increase in most of the United States, the State of California is expected to experience a decline in natural gas demand due to legislation such as SB 350 and SB 100.¹⁵

Another major source of energy for California is crude oil, which is the primary source of transportation fuels in the state. Oil supply sources for the state include in-state production, Alaska, and foreign imports. Of the approximately 642 million barrels of crude oil delivered to California refineries in 2018, California produced 27.73 percent¹⁶, while foreign sources and Alaska provided 57.59 percent and 14.67 percent, respectively.¹⁷ These transportation fuels include gasoline and diesel, gasoline being the largest transportation fuel by volume used in California, followed closely by diesel fuel. In 2018, approximately 15.5 billion gallons of gasoline and approximately 3.1 billion gallons of diesel fuel were sold in California's retail market.^{18,19} Nearly all semi-trucks, delivery vehicles, buses, trains, ships, buses, and other equipment have diesel engines. Additional transportation fuels include electricity and natural gas, which are less common than oil and diesel vehicles.

7.2.2 ENERGY PROVIDERS

Two energy providers, Central Coast Community Energy and Pacific Gas & Electric (PG&E), serve the General Plan Planning Area as described below.

7.2.2.1 Central Coast Community Energy

In 2018, the Central Coast Community Energy (CCCE), previously known as Monterey Bay Community Power, was created as a joint powers authority, established as part of the Community Choice Energy model implemented by the State of California. CCCE is the default electricity provider for all communities in San Benito County, including Hollister, as well as for communities in Santa Cruz and Monterey Counties. Additionally, CCCE provides service to parts of San Luis Obispo and Santa Barbara Counties. CCCE provides two choices for electricity generated: 3Cchoice and 3Cprime. 3Cchoice is a power mix generated by 69

¹³ California Energy Commission, 2018, Tracking Progress, California's Declining Reliance on Coal- Overview, https://www.energy.ca.gov/sites/default/files/2019-12/declining_reliance_coal_ada.pdf, accessed on April 27, 2020.

¹⁴ California Energy Commission, 2017, Supply and Demand of Natural Gas in California, https://ww2.energy.ca.gov/almanac/naturalgas_data/overview.html, accessed on April 14, 2020.

¹⁵ Campagna, Jennifer, Leon Brathwaite, Anthony Dixon, Jason Orta, Peter Puglia. 2019. 2019 Natural Gas Market Trends and Outlook Report. California Energy Commission. Publication Number: CEC-200-2019-018, page 3.

¹⁶ This total may include minor amounts from North Dakota and the Gulf Coast States.

¹⁷ California Energy Commission, 2019, Oil Supply Sources to California refineries, https://ww2.energy.ca.gov/almanac/petroleum_data/statistics/2019_monthly_oil_sources.html, accessed on April 14, 2020.

¹⁸ State of California Board of Equalization, 2019, Net Taxable Gasoline Gallons.

¹⁹ State of California Board of Equalization, 2019, Net Taxable Diesel Gallons.

percent large hydroelectric power, and 31 percent renewable sources, including geothermal (10 percent), solar (8 percent), wind (8 percent) and biomass and biowaste (2 percent). 3Cprime is a fully renewable service which includes 50 percent solar power and 50 percent wind power.²⁰ Individuals residing or working in CCCE's service area, including Hollister, are automatically enrolled in CCCE's 3Cchoice program. Customers may elect to opt-out of receiving their electricity supply from CCCE, which defaults those customers to PG&E's electricity supply.²¹ All electric energy provided by CCCE is conveyed to customers through PG&E's existing infrastructure. PG&E continues to maintain the grid, repair lines, and conduct customer billing within the CCCE service area.²² CCCE is on track to meet California's renewable energy goal of supplying 33 percent of electricity from renewable resources that qualify under California's Renewables Portfolio Standard by 2020. CCCE has committed to accelerating the deployment of renewable energy to their power mix in order to supply 60 percent of electricity from eligible renewables by the end of 2025 and 100 percent of electricity from eligible renewables by the end 2030.²³

7.2.2.2 Pacific Gas and Electric

PG&E provides natural gas service to the General Plan Planning Area and provides electricity service to customers who have opted out of participating in CCCE. PG&E is a publicly traded utility company which generates, purchases, and transmits energy and natural gas under contract with the CPUC. PG&E owns and maintains above-ground networks of electric and gas transmission and distribution facilities throughout the General Plan Planning Area. Both gas and electrical service is available throughout the entirety of the General Plan Planning Area.

PG&E's service territory is 70,000 square miles, roughly extending north to Eureka, south to Bakersfield, west to the Pacific Ocean, and east to the Sierra Nevada mountain range. PG&E's electricity distribution system consists of 106,681 circuit-miles of electric distribution lines and 18,466 circuit-miles of interconnected transmission lines. PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, also known as solar farms. The bulk electric grid (collectively referred to as "The Grid"), is a network of high-voltage transmission lines, linked to power plants within the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2018 consisted of non-emitting nuclear generation (34 percent), large

²⁰Central Coast Community Energy, Understanding Clean Energy, <https://3cenergy.org/understanding-clean-energy/>, accessed September 8, 2020.

²¹ The Opt-Out rate is free for the first 60 days of service. After the first 60 days of service, the fee is \$5 for residential accounts and \$25 for commercial accounts.

²² Central Coast Community Energy, Understanding Clean Energy, <https://3cenergy.org/understanding-clean-energy/>, accessed September 8, 2020.

²³ Central Coast Community Energy, Understanding Clean Energy, <https://3cenergy.org/understanding-clean-energy/>, accessed September 8, 2020.

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hydroelectric facilities (13 percent), and eligible renewable resources (39 percent), such as wind, geothermal, biomass, solar, and small hydro. The remaining portion came from natural gas and other unspecified fuels (15 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail.²⁴ PG&E met California’s 2020 renewable energy goal, supplying 33 percent of electricity from renewable resources that qualify under California’s Renewables Portfolio Standard, three years ahead of schedule. PG&E continues to add more renewable energy to their power mix and is projected to supply electricity from 50 percent eligible renewables by the end of 2030.²⁵

PG&E’s natural gas (methane) pipe delivery system includes 42,141 miles of distribution pipelines, and 6,438 miles of transportation pipelines. Gas delivered by PG&E originates in gas fields in California, the US Southwest, the US Rocky Mountains, and from Canada. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

PG&E gas transmission pipeline systems serve approximately 4.3 million gas customers in northern and central California.²⁶ The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. A new program, the Pipeline 2020 program, aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely-operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders.²⁷

7.2.3 EXISTING ENERGY INFRASTRUCTURE IN HOLLISTER

PG&E owns and operates all overhead electric power lines in San Benito County. The City of Hollister is served specifically by the Hollister substation, which additionally serves San Juan Bautista. The Hollister substation is supplied power through two 115 kV (kilovolt) power lines.²⁸

There is one primary natural gas pipeline which runs east to west, parallel to Santa Ana Road, in the central portion of the General Plan Planning Area. There are two lines running south into the core of Hollister, one which extends south parallel to San Benito Street, terminating in the downtown core, and

²⁴ Pacific Gas and Electric Company, 2019, PG&E’s 2018 Where Your Electricity Comes From, https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2019/1019-Power-Content-Label.pdf, accessed on April 15, 2020.

²⁵ Pacific Gas and Electric Company, 2019, PG&E’s 2018 Where Your Electricity Comes From, https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2019/1019-Power-Content-Label.pdf, accessed on April 15, 2020.

²⁶ Pacific Gas and Electric. 2019. Company Profile. https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed April 15, 2020.

²⁷ Pacific Gas and Electric. 2009. Pipeline 2020 Program. <https://www.pge.com/about/newsroom/mediaevents/pipeline2020/index.shtml>

²⁸ State of California Public Utilities Commission, 2013, Pacific Gas and Electric Company’s Hollister 115 kV Power Line Reconductoring Project, <https://www.cpuc.ca.gov/Environment/info/esa/hollister/hollister.html>, accessed on April 28, 2020.

one which runs perpendicularly south of Buena Vista Road, ultimately meeting with Highway 156 and heading west.²⁹

7.2.4 EXISTING ENERGY USE IN HOLLISTER

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh. Both kWh of electricity and therms of natural gas are typically broken out into residential and non-residential land uses.

Energy use in the city of Hollister is generally consistent with energy use in similar sized cities in California. In 2018, PG&E reported supplying 34,749,373 kWh of electricity to residential land uses, 18,575,828 kWh of electricity to non-residential land uses, and 9,005,771 kWh of commercial direct access electricity.³⁰ The CCCE reported a total of 25,213,742 kWh of residential electricity and 61,405,148 kWh of non-residential electricity. Natural gas consumption citywide in 2018 for residential land uses was 4,215,973 therms and nonresidential land uses was 2,044,082 therms,³¹ totaling approximately 6 million therms.

In the City of Hollister there are 2,354 locations which have installed solar PV. Of these solar PV installations, 2,292 of them are at residential properties, while 62 are located on non-residential properties which includes commercial buildings, institutions, educational facilities, non-profits, and industrial land uses.³² The total amount of solar PV installations in Hollister have a total capacity of 19,412.63 kW of direct current. Over the course of a year, one kW is able to generate 1,619 kWh, meaning that solar PV installations in the city of Hollister are able to generate a total of approximately 13.4 million kWh annually.³³

7.3 IMPLICATIONS FOR THE GENERAL PLAN UPDATE

Based on information contained in this chapter, the General Plan Update process should address the following issues:

- Identify policies and programs that support increased energy conservation and efficiency.
- Identify strategies to reduce local energy costs.
- Examine the potential effects of climate change on the state and local energy supply.

²⁹ Pacific Gas and Electric, Learn Where Natural Gas Pipelines are Located, https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page, accessed on April 28, 2020.

³⁰ Berteaud, Amaury. Special Projects Manager, Association of Monterey Bay Area Governments. Direct text information, September 9, 2020.

³¹ The nonresidential gas usage total excludes industrial uses due to privacy regulations.

³² California Distributed Generation Statistics, April 30, 2020, Download Data, Distributed Generation Interconnection Program Data, NEM Currently Interconnected Data Set, <https://www.californiadgstats.ca.gov/downloads/>, accessed April 22, 2020.

³³ U.S. Department of Energy, National Renewable Energy Laboratory, PVWatts Calculator, <https://pvwatts.nrel.gov/>, accessed on August 24, 2020.

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- Examine energy resiliency requirements for future development.
- Identify policies and programs that encourage renewable energy infrastructure such as EV charging stations or solar panels.