

4.5 Energy

This section discussed the potential energy impacts of the 2045 General Plan. This analysis follows the guidance for evaluation of energy impacts contained in Appendix E and *CEQA Guidelines* Appendix G. The physical environmental impacts associated with the generation of electricity and burning of fuels have been accounted for in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*. The physical environmental impacts associated with the installation of electric and natural gas infrastructure have been accounted for in Section 4.16, *Utilities and Service Systems*.

4.5.1 Setting

Energy use relates directly to environmental quality because energy use can adversely affect air quality and can generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to create electricity that powers residences, heats and cools buildings, and powers vehicles. Transportation energy use is dependent on the fuel efficiency of cars, trucks, and public transportation; the different travel modes such as auto, carpool, and public transit; and the miles traveled using these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

a. Energy Supply

Petroleum

California is one of the top producers of petroleum in the nation with drilling operations occurring throughout the State but concentrated primarily in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area (California Energy Commission [CEC] 2023a). According to the United States Energy Information Administration (USEIA), California's field production of crude oil totaled 122.4 million barrels in 2022 (USEIA 2023).

No petroleum refineries are located within Solvang. According to the California Geologic Energy Management Division (CalGEM), there are no wells within Solvang's Planning Area, but there are three plugged dry hole wells adjacent to the Planning Area on Ballard Canyon Road and in agricultural fields approximately 0.50-mile west and 0.81-mile east of the city limits, respectively (CalGEM 2023a).

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. Their use is encouraged through various Statewide regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill (SB) 32. Alternative vehicle fuels include hydrogen, biodiesel, and electricity. Currently, 56 hydrogen and 33 biodiesel refueling stations are located in California, but none are located in Solvang. There are seven electric vehicle charging centers located in Solvang (United States Department of Energy 2023). Fuel yards are currently permitted in the City's M-1 zone.

Electricity

In 2022, California’s in-state electricity generation totaled 194,320 megawatts (CEC 2023b). Primary fuel sources for the State’s electricity generation in 2022 included natural gas, hydroelectric, solar photovoltaic, wind, nuclear, geothermal, biomass, and solar thermal. According to the Final 2022 Integrated Energy Policy Report, California’s electricity sector is becoming increasingly reliant on solar, with more than 22,000 GWh of electricity produced by photovoltaic systems in 2021. (CEC 2023c).

The Pacific Gas and Electric Company (PG&E) provides transmission lines to convey electric power supply to Solvang. PG&E is one of the nation’s largest electric and gas utility companies, maintaining 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2023a). In 2022, PG&E’s power mix consisted of 38.3 percent renewables, 49.3 percent nuclear generation, 4.8 percent natural gas, and 7.6 percent large hydroelectric facilities (PG&E 2023b). According to PG&E’s 2022 Integrated Resource Plan, PG&E anticipates meeting a 2030 energy load demand of 28,020 gigawatt-hours (PG&E 2022).

Central Coast Community Energy

Central Coast Community Energy (3CE) is a Community Choice Aggregator established by local communities to source clean and renewable electricity for Santa Barbara, San Luis Obispo, Monterey, San Benito, and Santa Cruz counties while retaining the primary utility provider’s (i.e., PG&E) traditional role delivering power, maintaining electric infrastructure, and billing for electricity. In 2022, 3CE’s power mix consisted of 35.8 percent renewable resources, 5.9 percent large hydroelectric facilities, and 58.3 percent unspecified power (3CE 2023).

Natural Gas

According to CalGEM, California’s net natural gas production for 2020 was 149 billion cubic feet (CalGEM 2023b). The State of California relies on out-of-state imports for nearly 90 percent of its natural gas supply. The CEC estimates approximately 45 percent of the natural gas burned in California was used for electricity generation, and the remainder is consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors (CEC 2023d).

Solvang is in the natural gas service area of the Southern California Gas Company (SoCalGas) which spans central and southern California. SoCalGas’ service area is equipped with over 101,000 miles of gas transmission, distribution, and service pipelines (SoCalGas 2013). Natural gas supplied by SoCalGas is sourced from gas fields in several sedimentary basins in the western United States and Canada including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains, western Canada, and local California supplies (California Gas and Electric Utilities 2022).

b. Energy Demand

The smallest scale at which energy consumption information is readily available is the county level. Therefore, energy consumption in Santa Barbara County is used herein to characterize Solvang’s existing consumption of petroleum, electricity, and natural gas as detailed in the following subsection.

Petroleum

Santa Barbara County consumed an estimated 170 million gallons of gasoline and an estimated 22 million gallons of diesel fuel in 2022 (CEC 2023e). Solvang consumed an estimated 2.2 million gallons of gasoline and 286,000 gallons of diesel fuel in 2022. Table 4.5-1 provides an overview of 2022 gasoline and diesel consumption in Santa Barbara County and Solvang.

Table 4.5-1 2022 Gasoline and Diesel Consumption

Fuel Type	Santa Barbara County (gallons)	Solvang (gallons) ²
Gasoline	170,000,000	2,210,000
Diesel	22,000,000	286,000

¹ Solvang’s gasoline and diesel consumption is estimated based on the population of Solvang (5,644) to the population of Santa Barbara County (440,557). For reference, the population of Solvang is approximately 1.3 percent of the population of Santa Barbara.

Sources: CEC 2023e; California Department of Finance (DOF) 2023

Electricity

Santa Barbara County consumed an estimated 2,804 gigawatt-hours of electricity in 2022. Solvang consumed an estimated 36 gigawatt-hours of electricity in 2022, which was less than 0.01 percent of 3CE’s total electricity consumption (CEC 2023f; 3CE 2022). Table 4.5-2 provides an overview of 2022 electricity consumption in Santa Barbara County, in Solvang, and by 3CE customers.

Table 4.5-2 2022 Electricity Consumption

Energy Type	Santa Barbara County (GWh)	3CE (GWh)	Solvang (GWh) ¹	Solvang Proportion of 3CE Consumption
Electricity	2,804	4,936,845	36	0.0007

GWh = Gigawatt-hours

¹ Solvang’s gasoline and diesel consumption is estimated based on the population of Solvang (5,644) to the population of Santa Barbara County (440,557). For reference, the population of Solvang is approximately 1.3 percent of the population of Santa Barbara).

Sources: CEC 2023f; DOF 2023; 3CE 2022

Natural Gas

Santa Barbara County consumed approximately 129 million therms of natural gas in 2022. Solvang consumed an estimated 1.7 million therms of natural gas in 2022 which was approximately 0.03 percent of the natural gas consumed by SoCalGas (CEC 2023g; CEC 2023h). Table 4.5-3 provides an overview of natural gas consumption in Santa Barbara County, in Solvang, and by SoCalGas customers.

Table 4.5-3 2022 Natural Gas Consumption

Energy Type	Santa Barbara County (millions of Therms)	SoCalGas (millions of Therms)	Solvang (millions of Therms) ¹	Solvang Proportion of SoCalGas Consumption ¹
Natural Gas	129	5,026	1.7	0.03

¹ Solvang’s gasoline and diesel consumption is estimated based on the population of Solvang (5,644) to the population of Santa Barbara County (440,557). For reference, the population of Solvang is approximately 1.3 percent of the population of Santa Barbara.

Sources: CEC 2023g; CEC 2023h; DOF 2023

4.5.2 Regulatory Setting

a. Federal Regulations

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 was designed to improve vehicle fuel economy and help reduce nationwide dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting global climate change. Specifically, the Act set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development facilitated by the 2045 General Plan would be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code Section 17001 et seq.

b. State Regulations

California Energy Plan

The CEC, in collaboration with California Public Utilities Commission (CPUC), is responsible for preparing the California Energy Action Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The 2003 Energy Action Plan calls for the State to assist in transformation of the transportation system to improve air quality, reduce congestion, and increase efficient use of fuel supplies with the least environmental and energy costs. The Energy Action Plan identifies strategies, such as assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs and encourages urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. In the 2005 Energy Action Plan, the CEC and CPUC updated the energy policy vision by adding dimensions to the policy areas, such as information on the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the 2005 Energy Action Plan in 2008 that supplements the earlier Energy Action Plans and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1493

Assembly Bill 1493 (Chapter 200, Statutes of 2002), known as the Pavley Bill, amended Health and Safety Code Sections 42823 and added 43018.5, requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Senate Bills 350 and 100

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency in existing buildings by 2030.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, last updated by SB 350. SB 100 requires electricity providers to increase procurement from eligible renewable

energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

California Code of Regulations Title 24 (California Building Code)

Updated every three years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses meet strong energy efficiency and sustainability measures, thereby lowering their energy consumption. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code is applicable to all development in California (Health and Safety Code Sections 17950 and 18938[b]).

The regulations receive input from members of industry, as well as the public, with the goal of “[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (Public Resources Code Section 25402). These regulations are scrutinized and analyzed for technological and economic feasibility (Public Resources Code Section 25402[d]) and cost effectiveness (Public Resources Code Sections 25402[b][2] and [b][3]).

Part 6 Building Energy Efficiency Standards (Energy Code)

California Code of Regulations Title 24 Part 6 is the Building Energy Efficiency Standards. This code, originally enacted in 1978, establishes energy efficiency standards for residential and non-residential buildings in order to reduce California’s energy demand. The Building Energy Efficiency Standards is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New construction and major renovations must demonstrate their compliance with the current Building Energy Efficiency Standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission.

In 2021, the California Energy Commission updated Title 24 standards with more stringent requirements that became effective January 1, 2023. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided these standards exceed those provided in Title 24.

The 2022 update to the Building Energy Efficiency Standards under Title 24 applies to buildings for which an application for a building permit is submitted on or after January 1, 2023. The updated standards mainly established electric-ready requirements when natural gas is installed, expanded solar photovoltaic and battery storage standards, and strengthened ventilation standards to improve indoor air quality.

Part 11 California Green Building Standards

The California Green Building Standards Code, commonly referred to as “CALGreen” originally went into effect on August 1, 2009 and outlines architectural design and engineering principles that are in synergy with environmental resources and public welfare. CALGreen sets minimum standards for buildings, and since 2016, applies to new building construction and some alterations/additions within certain parameters. CALGreen establishes planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce

water consumption by 20 percent below a specified baseline. CALGreen requires installations of 1.28 gallons-per-flush toilets and 0.5-gallon-per flush urinals for all non-residential projects as part of the prescriptive method of reducing indoor water use by the required 20 percent.

CALGreen lays out the minimum requirements for newly constructed residential and non-residential buildings to reduce GHG emissions through improved efficiency and process improvements. It also includes voluntary tiers to encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design. In addition, CALGreen includes several requirements related to solid waste diversion. Importantly, new non-residential construction is required to achieve at least 65 percent construction and demolition waste diversion and provide recycling areas for paper, cardboard, glass, plastics, metal, and organic waste. The 2022 CALGreen update primarily includes new requirements for the inclusion of electric vehicle charging stations and carbon dioxide monitoring and controls in classrooms. These requirements went into effect January 1, 2023.

CARB In-Use On-Road and Off-Road Diesel Rules

The CARB In-Use On-Road and Off-Road Diesel Rules impose limits on idling, restrict the addition of older vehicles, and require the retirement or replacement of older engines depending on their fleet size category. This policy indirectly impacts energy consumption. More specifically, CARB is also charged with developing air pollution control regulations based upon the best available control measures and implementing every feasible control measure under the State and Federal Clean Air Act (Health and Safety Code Sections 39602.5, 39667, 43013[a, h], 43018, 40600, 40601, 40612[a][2] and [c][1][A]). Pursuant to these directives, stringent emission standards were adopted in 2004 for off-road construction equipment (i.e., “Tier 4” standards) (40 Code of Federal Regulations Parts 1039, 1065, and 1068; Title 13 California Code of Regulations Section 2025). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e., haul trucks) (13 California Code of Regulations Section 1956.8). These haul truck regulations mandate fleet turnover to ensure that nearly all on-road diesel trucks will have 2010 model year engines or equivalent (i.e., Tier 4) by January 1, 2023.

California Advanced Clean Trucks Program

In June 2020, CARB approved the Advanced Clean Trucks regulation, which requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. In addition, the regulation requires company and fleet reporting for large employers and fleet owners with 50 or more trucks. By 2045, all new trucks sold in California must be zero-emission. Implementation of this regulation would reduce consumption of nonrenewable transportation fuels as trucks transition to alternative fuel sources.

Executive Order N-79-20

Executive Order N-79-20 sets goals for the use of zero-emission vehicles in the State. Specifically, Executive Order N-79-20 sets a goal for California to ensure by 2035 100 percent of in-State sales of new passenger cars and trucks are zero-emission vehicles. Executive Order N-79-20 also sets a goal to ensure by 2045 100 percent of medium- and heavy-duty vehicles in the State are zero-emission vehicles. Executive Order N-79-20 also sets a goal to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

c. Local Regulations

Solvang Municipal Code

In January 2023, the City adopted and incorporated CALGreen into Title 10, Chapter 1, of the Solvang Municipal Code. As discussed further above, CALGreen establishes minimum efficiency requirements for new construction in order to reduce GHG emissions.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

Public Resources Code Section 21100(b)(3) states that an EIR shall include “mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy.” The physical environmental impacts associated with the use of energy, including the generation of electricity and burning of fuels, are discussed in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*. Energy consumption is analyzed herein in terms of construction and operational energy.

Construction energy demand for the 2045 General Plan is evaluated qualitatively because project-specific information regarding construction is unavailable for individual projects proposed under the 2045 General Plan. Construction energy demand accounts for anticipated energy consumption during construction of development facilitated by the 2045 General Plan, such as fuel consumed by construction equipment and construction workers’ vehicles traveling to and from the construction site. These construction activities would temporarily create a higher demand for energy supplies. The extent of energy use generated by construction equipment would depend on the quantity of equipment used and the hours of operation for each project.

The California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to approximate the operational natural gas and electricity consumption from development facilitated by the 2045 General Plan. The assumptions for CalEEMod are described under Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*. The CalEEMod output data for the 2045 General Plan, which also reports input data of project details that were used in the model, is provided in Appendix C.

This analysis determined an estimated operational energy demand from buildout of the 2045 General Plan. Operational energy demand accounts for the anticipated energy consumption from development facilitated by 2045 General Plan, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for on-site power generation and heating building spaces; and electricity consumed for building power needs, including, but not limited to, lighting, water conveyance, and air conditioning. The estimate of total daily vehicle miles traveled (VMT) associated with the 2045 General Plan is based on VMT data provided in Section 4.14, *Transportation*.

Significance Thresholds

CEQA Guidelines Appendix G provides the following significance thresholds to determine if a project would have a potentially significant impact on energy. For the purposes of this EIR, implementation of the proposed project may have a significant adverse impact if it would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

b. Project Impacts and Mitigation Measures

<p>Threshold 1: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</p>
<p>Threshold 2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</p>

Impact E-1 DEVELOPMENT FACILITATED BY THE 2045 GENERAL PLAN WOULD RESULT IN ENERGY USAGE. ADHERENCE TO STATE REGULATIONS AND 2045 GENERAL PLAN POLICIES WOULD ENSURE THESE IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Energy use during construction activities associated with development facilitated by the 2045 General Plan would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. In addition, temporary grid power may also be provided to construction trailers or electric construction equipment. Energy use during construction of individual projects would be temporary in nature, and equipment used would be typical of construction projects in the region. In addition, construction contractors would be required to demonstrate compliance with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Furthermore, in accordance with Executive Order N-79-20 it is anticipated construction trucks would largely transition to zero-emission vehicles by 2035. Construction activities would be required to utilize fuel-efficient equipment consistent with State and federal regulations and would comply with State measures to reduce inefficient, wasteful, or unnecessary consumption of energy.

Applicable regulatory requirements such as CALGreen (California Code of Regulations, Title 24, Part 11), mandate that future infrastructure projects comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. These practices would result in efficient use of energy during construction of development facilitated by the 2045 General Plan. As such, future construction activities associated with development facilitated by the 2045 General Plan would not result in wasteful, inefficient, or unnecessary consumption of energy.

Long-term operation of development facilitated by the 2045 General Plan would result in the use of energy resources to power buildings. Table 4.5-4 shows the annual operational energy usage associated with buildout of the 2045 General Plan.

Table 4.5-4 Projected 2045 Annual Operational Energy Usage

Source	Energy Consumption	
Vehicle Trips		
Gasoline	1,382,188 gallons	157,569.43 MMBtu
Diesel	126,351 gallons	14,404.01 MMBtu
Built Environment		
Electricity	58,267,121 kWh	198,815.64 MMBtu
Natural Gas Usage	155,846,117 kBtu	155,846.117 MMBtu

See Appendices C and E for CalEEMod default values for fleet mix and average distance of travel and energy calculation sheets, respectively.

As shown in Table 4.5-4, vehicle trips related to implementation of the 2045 General Plan would require approximately 1,382,188 gallons of gasoline and 126,351 gallons of diesel fuel, or 171,973.44 MMBtu annually (see Appendix D for energy calculation sheets). Gasoline and diesel fuel demands would be met by existing gasoline stations in the Planning Area vicinity.

Development (approximately 497 units) facilitated by the 2045 General Plan would mostly be infill residential developments in proximity to goods and services, which would reduce automobile travel and associated energy use. Furthermore, vehicles driven by future residents, employees, visitors, and patrons facilitated by the 2045 General Plan would be subject to increasingly stringent federal and State fuel efficiency standards, thereby minimizing the potential for the inefficient consumption of vehicle fuels. As a result, vehicle fuel consumption resulting from the 2045 General Plan would generally not be wasteful, inefficient, or unnecessary.

As shown in Table 4.5-4, the 2045 General Plan would result in the consumption of approximately 58,267,121 kWh or 198,815.64 MMBtu per year of electricity. The 2045 General Plan would result in the consumption of approximately 155,846,117 kBtu or 155,846.117 MMBtu per year of natural gas (see Appendix C for CalEEMod results). Electricity would be supplied by 3CE and natural gas would be supplied by SoCalGas. Development would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California’s Energy Efficiency Standards for Residential and Nonresidential Buildings) and CALGreen. The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The California Energy Code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances and provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The California Energy Code emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. CALGreen sets targets for energy efficiency; water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills; and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. In addition, the 2045 General Plan includes the following policies designed to reduce energy use from transportation and promote efficient energy use in buildings:

- **Policy ENV-9.3: Alternative Modes of Transportation.** The City shall encourage the use of alternative transportation modes, including transit, walking, and bicycling.

- **Policy ENV-9.4: Electric Vehicle Infrastructure.** The City shall encourage the installation of solar photovoltaic systems and electric vehicle charging facilities in commercial, residential, and industrial development.
- **Policy ENV-9.5: Fuel Efficient Vehicles.** The City shall encourage adoption of alternative fuel vehicles including electric, hybrid, hydrogen fuel cell, or other fuel-efficient vehicles, for personal transportation.
- **Policy ENV-9.6: City Fleet and Equipment.** The City shall work toward converting 100 percent of non-emergency City vehicles to electric, hybrid, flex-fuel, or alternative fuels. In addition, the City shall replace gas-powered mowers and other equipment with electric or hybrid models and to use alternative carbon-free models where possible.
- **Policy ENV-9.7: Sustainable Development Patterns.** The City shall continue to promote patterns of development that minimize dependence on personal automobiles and reduce VMT and GHG.
- **Policy ENV-13.1: Energy Efficiency Incentives.** The City shall work with energy providers and developers on voluntary incentive-based programs to encourage the use of energy efficient designs and equipment in existing buildings.
- **Policy ENV-13.2: Renewable Energy for Homes.** The City shall encourage installation of renewable energy sources for new homes per the new state building codes.
- **Policy ENV-13.3: Building Emissions Reductions Plan.** The City shall consider the adoption of an ordinance for all new buildings to meet State emissions reductions targets by 2045.
- **Policy ENV-13.4: Energy Retrofit Program.** The City shall encourage homeowners and building owners to retrofit their structures with energy efficiency improvements.
- **Policy ENV-13.5: Low Income Energy Efficiency.** The City shall partner with community service agencies and organizations to support energy efficient projects for low-income residents. Eligible projects may include, but are not limited to, the installation of heating, ventilation, and air-conditioning systems, lighting, water heating equipment, and insulation and weatherization.

Development facilitated by the 2045 General Plan would comply with the City's Municipal Code, which adopts the State's energy efficiency regulations, including the California Energy Code and CALGreen, to ensure development in Solvang promotes the State's energy efficiency goals through project design. Implementation of 2045 General Plan policies would further promote the State's energy efficiency goals by promoting alternative transportation, the use of energy efficient equipment, and energy retrofits. As development facilitated by the 2045 General Plan would receive electricity from 3CE, development facilitated by the 2045 General Plan would eventually be powered by renewable energy mandated by SB 100 and would not conflict with the requirements of SB 100. Proposed 2045 General Plan policies further promote energy efficiency. Policy ENV-9.4 encourages the City to promote and plan for the development of electric vehicle infrastructure and Policy ENV-9.5 encourages the use of alternative fuels. Policy ENV-13.2 promotes the installation of renewable energy sources in new development. Policy ENV-13.3 encourages the City to adopt an ordinance for new development to assist in meeting the state's 2045 emissions reductions targets. Accordingly, implementation of the 2045 General Plan would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Furthermore, adherence to the State's energy efficiency regulations, including the California Energy Code and CALGreen, as well as policies within the 2045 General Plan would ensure implementation of the 2045 General Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, these impacts would be less than significant.

Mitigation Measures

No mitigation measures are required because impacts would be less than significant.

4.5.4 Cumulative Impacts

Regional cumulative impacts consider the City-wide impacts together with similar impacts of reasonably anticipated regional projects/programs. The general approach to cumulative impact analysis used in this EIR, as well as the determination of the cumulative impact analysis area, is discussed in Section 3, *Environmental Setting*, Subsection 3.3, *Baseline and Cumulative Project Setting*.

Cumulative development surrounding Solvang in combination with development facilitated by the 2045 General Plan would use energy resources during construction and operation. However, cumulative development would be required to comply with the State's energy efficiency regulations, including CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment, the California Energy Code, and CALGreen. CARB regulations and CALGreen standards ensure energy is not consumed in a wasteful, inefficient, or unnecessary manner during construction. Furthermore, energy use during construction is temporary and intermittent. Energy use during operation of cumulative development would be regulated by the California Energy Code and CALGreen requirements which are specifically crafted so that buildings are characterized by energy efficient performance and do not consume energy in a wasteful, inefficient, or unnecessary manner during operation. Furthermore, the use of non-renewable energy resources are anticipated to decline through 2045 as State renewable energy requirements, including the requirements of SB 100, becoming increasingly stringent and renewable energy technology becomes more widely available. Accordingly, the construction and operation of cumulative development would not result in the wasteful, inefficient, or unnecessary use of energy resources, and cumulative impacts would be less than significant.

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