4.6 ENERGY

This section discusses energy use resulting from implementation of The Villages at Almond Grove Specific Plan (Specific Plan) and evaluates whether the proposed Specific Plan would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The energy use analysis in this section is based on estimates from the California Emissions Estimator Model (CalEEMod) version 2016.3.2 modeling results in Appendix E of this Environmental Impact Report (EIR).

4.6.1 Environmental Setting

4.6.1.1 Specific Plan Area

The Specific Plan Area is located within the Pacific Gas and Electric Company's (PG&E) service area that spans approximately 70,000 square miles from Eureka in the north to Bakersfield in the south and from the Pacific Ocean in the west to the Sierra Nevada in the east.

4.6.1.2 Energy Resources

Electricity. Electricity is a man-made resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, or nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).[1]

According to the most recent data available, in 2017, California's electricity was generated primarily by natural gas (33.67 percent), coal (4.13 percent), large hydroelectric (14.72 percent), nuclear (9.08 percent), and renewable sources (29 percent). Total electric generation in California in 2017 was 292,039 gigawatt-hours (GWh), up 0.5 percent from the 2016 total generation of 290,567 GWh. In 2017, California produced approximately 70.7 percent and imported 29.3 percent of the electricity it used.[2]

The City of Madera receives its electricity from PG&E. According to the California Energy Commission (CEC), total electricity consumption in the PG&E service area in 2018 was 80,368.7 gigawatt hours (GWh) (27,700.2 GWh for the residential sector and 52,668.4 GWh for the nonresidential sector).[3] Total electricity consumption in Madera County in 2018 was 1,665.6 GWh (430.2 GWh for the residential sector and 1,235.4 for the nonresidential sector).[4]

Natural Gas. Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface

1 United States Energy Information Administration. 2019a. Electricity Explained. Website: eia.gov/energyexplained/electricity (Accessed February 2020).
2 California Energy Commission. 2019a. *Notice of Request for Public Comments on the Draft Scoping Order for the 2019 Integrated Energy Policy Report*. Docket No. 19-IEPR-01.
3 California Energy Commission. 2019b. Electricity Consumption by Entity. Website: ecdms.energy.ca.gov/elecbyutil.aspx (Accessed February 2020).
4 California Energy Commission. 2019c. Electricity Consumption by County. Website: ecdms.energy.ca.gov/elecbycounty.aspx (Accessed February 2020).

of the Earth over many years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).[5]

Natural gas consumed in California is used for electricity generation (35 percent), residential uses (17 percent), industrial uses (33 percent), commercial uses (12 percent), and transportation uses (3 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply.[6]

PG&E is the natural gas service provider for the City of Madera. According to the CEC, total natural gas consumption in the PG&E service area in 2018 was 4,794.4 million therms (1,832.8 million therms for the residential sector and 2,961.6 million therms for the nonresidential sector).[7] Total natural gas consumption in Madera County in 2018 was 56.7 million therms (7.8 million therms for the residential sector and 48.9 million therms for the nonresidential sector).[8]

Fuel. Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil and gasoline.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, total gasoline consumption in California was 366,820 thousand barrels (15.4 billion gallons) or 1,853.5 trillion British Thermal Units (BTU) in 2017.[9] Of the total gasoline consumption, 350,604 thousand barrels (14.7 billion gallons) or 1,771.6 trillion BTU were consumed for transportation.[10] Based on fuel consumption obtained from EMFAC2017, 79.9 million gallons of gasoline and 39.3 million gallons of diesel fuel were consumed from vehicle trips in Madera County in 2019.

5 U.S. Energy Information Administration. 2019b. Natural Gas Explained-Use of Natural Gas. Website: eia.gov/energyexplained/index.php?page=natural_gas_use (Accessed February 2020).

6 California Energy Commission. 2019d. Supply and Demand of Natural Gas in California. Website: energy.ca.gov/almanac/naturalgas_data/overview.html (Accessed February 2020).

7 California Energy Commission. 2019e. Gas Consumption by Entity. Website: ecdms.energy.ca.gov/gasbyutil.aspx (Accessed February 2020).

8 California Energy Commission. 2019f. Gas Consumption by County. Website: ecdms.energy.ca.gov/gasbycounty.aspx (Accessed February 2020).

9 A British Thermal Unit is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

10 U.S. Energy Information Administration. 2019c. California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2017. Website: eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA (Accessed February 2020).

4.6.1.3 Regulatory Context

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (USDOT), the United States Department of Energy, and the United States Environmental Protection Agency (USEPA) are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy related research and development projects, and through funding for transportation infrastructure improvements. On the state level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy.

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies and serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

The CEC is the state's primary energy policy and planning agency. The CEC forecasts future energy needs, promotes energy efficiency, supports energy research, develops renewable energy resources and plans for/directs state response to energy emergencies. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal Policies and Regulations

Corporate Average Fuel Economy. Congress first passed the Corporate Average Fuel Economy (CAFE) law in 1975 to increase the fuel economy of cars and light-duty trucks. CAFE standards are federal regulations that are set to reduce energy consumed by on-road motor vehicles. The National Highway Traffic Safety Administration (NHTSA) regulates the standards and the USEPA measures vehicle fuel efficiency. The standards specify minimum fuel consumption efficiency standards for new automobiles sold in the United States. The law has become more stringent over time. The current standard is 27.5 miles per gallon (mpg) for passenger cars and 20.7 mpg for light-duty trucks.

On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the USEPA and the USDOT's NHTSA announced a joint final rule establishing a national program that would reduce greenhouse gas (GHG) emissions and improve fuel economy for new cars and trucks sold in the United States. The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2012 through 2016. This phase required these vehicles to meet a fuel economy standard of 35.5 mpg. The second phase applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles for model

years 2017 through 2025. This phase required these vehicles to meet an estimated fuel economy standard of 54.5 mpg.[11]

On September 15, 2011, the USEPA and USDOT issued a final rule for the first national standards to improve fuel efficiency of medium- and heavy-duty trucks and buses, model years 2014 through 2018. For combination tractors, the agencies proposed engine and vehicle standards that would achieve up to a 20 percent reduction in fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies proposed separate gasoline and diesel truck standards, which would achieve up to a 10 percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles (12 and 17 percent, respectively, if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption. On October 25, 2016, the USEPA and USDOT issued Phase 2 of the national standards to improve fuel efficiency standards for medium- and heavy-duty trucks and buses for model years 2021 through 2027 to achieve vehicle fuel savings as high as 25 percent, depending on the vehicle category.[12]

Safer Affordable Fuel-Efficient Vehicles Rule. On August 2, 2018, the current Administration released a notice of proposed rulemaking, *The Safer Affordable Fuel-Efficient* (SAFE) *Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule) to amend the CAFE and GHG emission standards established in 2012 for model years 2021 through 2026. The SAFE Vehicles Rule would decrease fuel economy and would withdraw the California Waiver for the California Advanced Clean Car program, Zero Emissions Vehicle mandate, and GHG emission standards for model years 2021 through 2026. Final rulemaking on the SAFE Vehicles Rule was issued on March 31, 2020.[13]

State Policies and Regulations

Assembly Bill 1575, Warren-Alquist Act. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State California Environmental Quality Act (CEQA) Guidelines* Section 15126.4 to require EIRs to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA*

11 National Highway Traffic Safety Administration. 2019a. Corporate Average Fuel Economy. Website: nhtsa.gov/laws-regulations/corporate-average-fuel-economy (Accessed February 2020).

12 United States Environmental Protection Agency. 2019. Final Rule for Phase 1 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles. Website: www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-phase-1-greenhouse-gas-emissions-standards-and (Accessed February 2020).

13 National Highway Traffic Safety Administration. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. Website: nhtsa.gov/corporate-average-fuel-economy/safe (Accessed January 2021).

Guidelines. Appendix F assists EIR preparers in determining whether a project would result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including: (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

Senate Bill 1389, Energy: Planning and Forecasting. In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles (ZEVs) and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an *Integrated Energy Policy Report* every 2 years and an update every other year. The most recently adopted reports include the *2017 Integrated Energy Policy Report*[14] and the *2018 Integrated Energy Policy Report Update.*[15] The *2017 Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The *2017 Integrated Energy Policy Report* covers a broad range of topics, including implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in the electricity sector, energy efficiency, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas, updates on Southern California electricity reliability, natural gas outlook, and climate adaptation and resiliency. The *2018 Integrated Energy Policy Report Update* included a review of the implementation of California's energy policies and updated the 2017 California energy demand forecasts that were adopted as part of the *2017 Integrated Energy Policy Report* proceedings.

The CEC approved the *2019 Integrated Energy Policy Report* in February 2020.[16] The *2019 Integrated Energy Policy Report* also covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable

14 California Energy Commission. 2018a. *2017 Integrated Energy Policy Report*. California Energy Commission. Publication Number: CEC-100-2017-001-CMF. February.

15 California Energy Commission. 2018b. *2018 Integrated Energy Policy Report Update*. California Energy Commission. Publication Number: CEC-100-2018-001-VI. February.

16 California Energy Commission. 2019g. Notice of Request for Public Comments on the Draft Scoping Order for the 2019 Integrated Energy Policy Report. Docket No. 19-IEPR-01.

energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Renewable Portfolio Standards. SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.[17]

California Energy Code (California Building Energy Efficiency Standards). Energy consumption by new buildings in California is regulated by the California Energy Code which is Part 6 under Title 24 of the California Code of Regulations (CCR Title 24). The 12 parts of the CCR Title 24 are known as the California Building Standards Code (CBSC). The California Energy Commission adopted its first energy code, titled the Energy Conservation Standards for New Residential and New Nonresidential Buildings, in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBSC is updated every 3 years, and the current 2019 California Energy Code went into effect on January 1, 2020. The California Energy Code applies to both new construction and rehabilitation of residential and non-residential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The California Energy Code is enforced through the local building permit process. Local government agencies may adopt an enforce energy standard for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California Green Building Standards Code. In 2008, the California Building Standards Commission adopted Part 11 of CCR Title 24, titled the California Green Building Standards Code (CALGreen Code) which became effective on August 1, 2009 as a voluntary code. The 2010 CALGreen Code was the first mandatory edition, took effect on January 1, 2011, and is now a part of the CBSC 3-year update cycle. The 2019 CALGreen Code standards became effective on January 1, 2020. The CALGreen Code establishes mandatory measures for residential and non-residential building construction and encourages sustainable construction practices in the following five categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State’s efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

[17] California Public Utilities Commission. 2019. Renewables Portfolio Standard Program. Website: cpuc.ca.gov/rps (Accessed February 2020).

California Energy Efficiency Strategic Plan. On September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California.[18] The Plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The Plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofit to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

Local Regulations

City of Madera General Plan. The City of Madera addresses energy efficiency in the Conservation Element of the General Plan.[19] The Conservation Element provides goals, policies, and action items that work to provide safe and reliable energy to meet Madera's needs and enable continued economic growth and integrate green building practices in public and private sector planning, design, construction, management, renovation, operations, and demolition of buildings. The policies and action items from the Conservation Element, listed in Table 4.6.A, would be applicable to the proposed Specific Plan.

Specific Plan. As identified in the Villages at Almond Grove Specific Plan future development under the Specific Plan would strive for energy reduction in excess of that required by Title 24 standards. In addition, the proposed Specific Plan encourages the following energy efficiency strategies (and Mitigation Measure EN-1.1, discussed below under Impacts and Mitigation Measures, requires these strategies to be implemented):

- Provide natural lighting, where feasible, to reduce reliance on artificial lighting.
- Use Low-E or EnergyStar windows.
- Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels.

[18] California Public Utilities Commission. 2008. *California Long-Term Energy Efficiency Strategic Plan*. September. Website: cpuc.ca.gov/General.aspx?id=4125 (Accessed February 2020).

[19] Madera, City of. 2009. *City of Madera General Plan. Conservation Element*. October 7.

Table 4.6.A: General Plan Policies Related to Energy

Policy/Action Item Number	Policy/Action Item
Policy CON-40	All public and private development—including homes, commercial, and industrial—should be designed to be energy-efficient. Action Item CON-40.1 Work with the local energy providers and developers on voluntary incentive-based programs to encourage the use of energy efficient designs and equipment. Action Item CON-40.2 Promote enhanced energy conservation standards for new construction through informational handouts, outreach to the construction industry, or other methods.
Policy CON-44	The City supports the use of green building practices in the planning, design, construction, management, renovation, operations, and demolition of all private buildings and projects, including: • Land planning and design techniques that preserve the natural environment and minimize disturbance of the land. • Site development to reduce erosion, minimize paved surfaces and runoff and protect vegetation, especially trees. • Water conservation indoors and outdoors. • Energy efficiency in heating/cooling systems, appliances, lighting and the building envelope. • Selection of materials based on recyclability, durability and the amount of energy used to create the material. • Waste reduction, reuse and recycling during construction and throughout the life of the project. • Other new aspects of green design and construction included in LEED or other certification programs. • Control nighttime lighting to lower energy use, reduce glare, and prevent illumination of the night sky.
Policy CON-45	The City supports the use of green building practices in the planning, design, construction, management, renovation, operations, and demolition of facilities constructed, owned, managed, or financed by the City. All new building projects (projects intended for human occupancy) involving the use of local public funds should incorporate green building practices. Except as dictated by unique circumstances associated with a given project, the typical standard for green building will be the equivalent of the "LEED Silver Standard."

Source: City of Madera General Plan (October 2009).

- Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation.

- Implement some of the strategies of the EnergyStar program.

- For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs.

- In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel efficient vehicles.

4.6.2 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to energy that could result from implementation of the proposed Specific Plan. The section begins with the criteria of significance, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the Specific Plan and the recommended mitigation measures, if required. Mitigation measures are recommended, as appropriate, for significant impacts to eliminate or reduce them to a less-than-significant level. Cumulative impacts are also addressed.

4.6.2.1 Significance Criteria

The thresholds for impacts related to energy used in this analysis are consistent with Appendix G of the State CEQA Guidelines. Development of the proposed Specific Plan would result in a significant impact related to energy if it would:

Threshold 4.6.1 **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or**

Threshold 4.6.2 **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.**

4.6.2.2 Project Impacts

The following discussion describes the potential impacts related to energy resources that could result from implementation of the proposed Specific Plan.

Threshold 4.6.1 **Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

Implementation of the Specific Plan would result in approximately 10,800 residential units, approximately 2.1 million square feet of commercial and office space, approximately 165 acres of parks and recreational area, and approximately 55 acres of public facilities including schools. Energy would be consumed throughout the construction and operation of such new development. Energy would also be required during construction for the transportation of building materials, manufacturing of building materials, and the actual construction of buildings and infrastructure. During project operation, energy use would be associated with building heating and cooling, use of consumer products, lighting, and vehicular traffic.

The anticipated construction schedule assumes that the proposed Specific Plan would be built over a 28-year period. The proposed Specific Plan would require grading, site preparation, and building activities during construction. Construction of the proposed Specific Plan would require energy for the manufacture and transportation of building materials, preparation of the site for grading activities, and building construction. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities.

Therefore, the analysis of energy use during construction focuses on fuel consumption. Construction trucks and haul trucks would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation use depends on the type and number of trips, VMT, the fuel efficiency of the vehicles, and travel mode.

Based on the proposed Specific Plan's anticipated construction schedule, equipment, trips, and VMT as shown in 4.3, Air Quality, the project would consume approximately 31.0 million gallons of gasoline and approximately 1.9 million gallons of diesel fuel during construction activities.[20] Additional calculation details are included in Appendix E. When averaged over the 28-year construction period, buildout of the Specific Plan would consume approximately 1.1 million gallons of gasoline and approximately 0.7 gallons of diesel fuel per year. As identified above, based on fuel consumption obtained from EMFAC2017, 79.9 million gallons of gasoline and 39.3 million gallons of diesel fuel were consumed from vehicle trips in Madera County in 2019. As such, project construction activities would increase the annual gasoline fuel usage in Madera County by approximately 1.4 percent and would increase diesel fuel use in Madera County by approximately 0.2 percent. Therefore, project construction would have a negligible effect on local and regional energy supplies. Furthermore, construction activities are not anticipated to result in an inefficient use of energy, as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project.

Operational energy use consumed by the projects associated with buildout of the Specific plan would be associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with the proposed Specific Plan. LSA estimated energy and natural gas consumption using default energy intensities by land use type in California Emissions Estimator Model version 2016.3.2 (CalEEMod). In addition, the proposed buildings would comply with the latest CALGreen standard building measures and Title 24 standards, which were included in CalEEMod. Electricity and natural gas usage estimates associated with the proposed Specific Plan are shown in Table 4.6.B.

As shown in Table 4.6.B, the estimated potential increase in electricity demand associated with the operation of the proposed Specific Plan is 97,301,371 kWh per year. With a total buildout population of 38,280 residents, this would result in a per capita usage of 2,542 kWh per year. Total electricity demand for Madera County in 2018 was approximately 1,665,572,602 kWh. With a total population in 2018 of 156,882 residents, this resulted in a per capita usage of 10,617 kWh. Although operation of the proposed Specific Plan would increase the annual electricity consumption in Madera County by approximately 5.8 percent, the total per capita electricity usage per capita would be approximately 9,033 kWh, a decrease of approximately 1,584 kWh per year.[21]

[20] California Air Resources Board. 2020. *MSEI - Documentation - Off-Road - Diesel Equipment*. Website: ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road (Accessed April 6, 2020).

[21] This assumes the total annual electricity usage of the proposed Specific Plan (97,301,371 kWh) is added to the total 2018 electrical use of the County (1,665,572,602) for a total of 1,762,873,973 kWh. This total is then divided by the total buildout population of the proposed specific Plan (38,280) and the 2018 population of Madera County (156,882) a total of 195,162 residents, for a per capita usage of 9,033 kWh per year.

This decrease is attributable to in the use of newer energy efficient appliances and new construction methods that result in lower energy use.

Table 4.6.B: Estimated Annual Energy Use of Proposed Specific Plan

Land Use	Size	Electricity Use (kWh per year)	Natural Gas Use (therms per year)
Phase I			
Single Family Housing	2,257 dwelling units	19,236,200	554,805
Condo/Townhouse	1,718 dwelling units	9,151,180	291,591
Elementary School	700 students	402,060	13,748
Village Mixed Use[1]	651,000 square feet	5,208,130	65,745
Phase I Total	**-**	**33,997,570**	**925,889**
Phase II			
Single Family Housing	5,043 dwelling units	42,981,100	1,239,646
Condo/Townhouse	2,278 dwelling units	12,134,100	386,637
Elementary School	1400 students	804,121	27,497
Village Mixed Use[1]	232,610 square feet	6,720,170	84,832
Office Park	840,000 square feet	2,653,940	49,425
Phase II Total	**-**	**65,293,431**	**1,788,036**
Phase III			
Single Family Housing	6,640 dwelling units	1,206,181	1,632,214
Condo/Townhouse	4,161 dwelling units	22,164,200	706,233
Elementary School	2,100 students	1,206,181	41,245
Village Mixed Use[1]	232,610 square feet	14,684,850	15,374
Office Park	1,835,560 square feet	2,653,940	49,425
Phase III Total	**-**	**97,301,371**	**2,614,489**

Source: LSA (April 2020).

[1] For the purpose of providing a conservative estimate of annual energy use, the Village Mixed Use land use does not include residential land uses, and the estimated energy use of Village Mixed Use does not include residential energy usage.

As shown in Table 4.6.B, the estimated potential increase in natural gas demand associated with the proposed Specific Plan is 2,614,489 therms per year. With a total buildout population of 38,280 residents, this would result in a per capita usage of approximately 68 therms per year. Total natural gas in Madera County in 2018 was 56,740,404 therms. With a total population in 2018 of 156,882 residents, this resulted in a per capita usage of approximately 362 therms per year. Although operation of the proposed Specific Plan would increase the annual natural gas consumption in Madera County by approximately 4.6 percent, the total per capita natural gas usage per capita would be approximately 304 therms per year, or a decrease of approximately 58 therms per year.[22] This decrease is attributable to in the use of newer energy efficient appliances and new construction methods that result in lower energy use.

[22] This assumes the total natural gas usage of the proposed Specific Plan (2,614,489 therms) is added to the total 2018 natural gas usage of Madera County (56,740,404) for a total of 59354893 therms per year. This total is then divided by the total buildout population of the proposed specific Plan (38,280) and the 2018 population of Madera County (156882), a total of 195,162 residents, for a per capita usage of 58 therms per year.

Electrical and natural gas demand associated with project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Furthermore, the proposed Specific Plan would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Implementation of the proposed Specific Plan would be required to adhere to all federal, State, and local requirements for energy efficiency. In addition, the proposed Specific Plan would encourage future development to exceed Title 24 standards and the following energy efficiency strategies would be incorporated as required in Mitigation Measure EN-1.1:

- Provide natural lighting, where feasible, to reduce reliance on artificial lighting.
- Use Low-E or EnergyStar windows.
- Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels.
- Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation.
- Implement some of the strategies of the EnergyStar program.
- For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs.
- In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel-efficient vehicles.

With adherence to State and local plans for renewable energy or energy efficiency and implementation of the energy efficiency strategies as identified in Mitigation Measure EN-1.1, impacts related to electricity and natural gas use would be less than significant.

The increase in population, housing, and jobs generated by new development associated with implementation of the proposed Specific Plan would have the potential to increase the demand on energy resources. The increase in population would lead to an increased demand on energy resources because of additional buildings and infrastructure required to support the growing population's demand for energy-dependent heating, cooling, lighting, electronics, and appliances powered by electricity and natural gas.

The private utility supplying the City with electricity and natural gas services, PG&E, periodically updates its load forecasts to ensure the reliability of its electricity and gas services. As implementation of the proposed Specific Plan would occur over a 28-year period, the projected incremental electric and gas demand would be incorporated into PG&E's forecasts.

The land use designations in the City's General Plan, in part, form the foundation for PG&E's forecasts. The population and growth associated with the proposed Specific Plan was accounted for in the City's General Plan. As such, the growth projections used for the Specific Plan assume that growth in population, housing, and jobs will occur at rates that are consistent with the rates used to develop the projected incremental electric and gas demand would be incorporated into PG&E's forecasts. Furthermore, implementation of the proposed Specific Plan would allow for implementation of sustainability efforts that reduce motor vehicle use and energy consumption. This is accomplished with more compact development achieved by increasing development density and by providing a land use pattern and transportation infrastructure more supportive of public transportation, walking, and bicycling. In addition, as described below and in Section 4.16, Transportation, the proposed Specific Plan would result in lower VMT when compared to the regional average, and would therefore reduce vehicle use and energy consumption. Therefore, implementation of the proposed Specific Plan would not result in the construction of new electric or natural gas infrastructure beyond what has already been assumed and will be included in PG&E's regional forecasts. Additionally, because developments that would be considered under the proposed Specific Plan have not been designed or proposed at this time, potential improvements to the current energy and natural gas facilities would be identified at the time such projects are proposed. In the event that new energy facilities are needed at a later date, such discretionary projects would be required to undergo a separate CEQA review process and their impacts would be assessed at that time. As such, impacts related to the possible need for new electrical or gas generation or transmission facilities as a result of implementation of the proposed Specific Plan would be considered less than significant. No mitigation is required.

In addition to increasing the demand for electricity and natural gas, implementation of the proposed Specific Plan would result in energy usage associated with gasoline to fuel project-related trips (i.e., the use of motor vehicles). When evaluating a long-range planning project, forecasting future travel methods and gasoline use is too speculative and not appropriate or feasible. Rather, the more appropriate measure of estimating energy use is to consider the distance traveled by vehicles associated with the proposed Specific Plan. Therefore, this analysis is centered on the overall VMT associated with the new development allowed by the proposed Specific Plan and its associated transportation energy use.

As discussed in 4.16, Transportation, VMT per capita, VMT per service population, and VMT per employee for the project under horizon year (2042) were compared with corresponding values for the existing (2019) regional VMT per capita, VMT per service population, and VMT per employee respectively. The horizon year (2042) project VMT per capita is 24.6 percent lower than the existing (2019) regional average. Similarly, horizon year VMT per service population for the project is 20.1 percent lower than the existing (2019) regional average. The project's horizon year VMT per employee is 35.6 percent lower than existing (2019) regional average. As the project's horizon year VMT is below that of the regional average and the proposed project would not result in a significant impact on gasoline demand. Moreover, the fuel efficiency of vehicles is expected to continue to increase and improve throughout the life of the project as new fuel economy standards are established.

In addition, implementation of the proposed Specific Plan aims to promote mixed-use development and encourage alternative modes of transportation to reduce vehicle trip lengths and reliance on the automobile, which in turn, would reduce the transportation energy demand in the planning area. Implementation of the proposed Specific Plan also encourages development of housing near employment and transportation, which would lead to a potential decrease in VMT. Implementation of the proposed Specific Plan would also promote land use patterns that would improve walking and bicycling facilities to be more prominent, comfortable, and safe throughout the City, which would serve to reduce the overall transportation energy demand.

Therefore, although implementation of the proposed Specific Plan would result in an increase in transportation-related energy uses, the increase would not result in wasteful, inefficient, or unnecessary consumption of energy resources with the implementation of Mitigation Measure EN-1.1. Mitigation Measure EN-1.1 requires implementation of energy efficiency strategies to reduce potential impacts related to wasteful, inefficient, or unnecessary consumption of energy resources to a less-than-significant level.

Level of Significance Without Mitigation**:** Potentially significant.

Impact EN-1: The Specific Plan would increase energy consumption during the operational phase.

Mitigation Measure EN-1.1: Prior to approval of building permits, the Community Development Director or designee shall ensure that the energy efficiency strategies identified in the Specific Plan are incorporated project construction documents. These energy efficient strategies include, but are not limited to the following:

- Provide natural lighting, where feasible, to reduce reliance on artificial lighting.
- Use Low-E or EnergyStar windows.
- Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels.
- Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation.
- Implement some of the strategies of the EnergyStar program.
- For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs.

- In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel efficient vehicles.

Level of Significance With Mitigation**:** Less than significant.

Threshold 4.6.2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Future projects facilitated by implementation of the proposed Specific Plan would be required to comply with the CALGreen Code (Title 24, Part 11) and the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6), which includes provisions related to insulation and design aimed at minimizing energy consumption. Future development associated with implementation of the proposed Specific Plan would also be required through implementation of Mitigation Measure EN-1.1 to comply with the energy efficiency strategies as listed above in Section 4.6.13 and include the use of Low-E or EnergyStar window, high-efficiency lighting systems, energy-efficient heat/cooling systems with thermally efficient buildings. Compliance with the energy efficiency strategies would be required for development projects through the implementation of Mitigation Measure EN-1.1, as described above.

In addition, implementation of the proposed Specific Plan aims to promote mixed-use development and encourage alternative modes of transportation to reduce vehicle trip lengths and reliance on the automobile, which in turn, would reduce the transportation energy demand in the planning area. Implementation of the proposed Specific Plan also encourages development of housing near employment and transportation, which would lead to a potential decrease in VMT. Implementation of the proposed Specific Plan would also promote land use patterns that would improve walking and bicycling facilities to be more prominent, comfortable, and safe throughout the Specific Plan Area, which would serve to reduce the overall transportation energy demand.

In addition to complying with federal, State, and local standards regulating energy consumption, implementation of the proposed Specific Plan is also required to comply with Appendix F, Energy Conservation, of the *State CEQA Guidelines*. Specifically, Appendix F requires that EIRs include a discussion of potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Table 4.6.C includes a project-specific consistency analysis with applicable Appendix F considerations.

Table 4.6.C: Proposed Specific Plan Comparison to State CEQA Guidelines Appendix F

Appendix F Items for Consideration	Proposed Specific Plan
1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.	**Consistent.** Energy use during construction of future development facilitated by the proposed Specific Plan would primarily involve gasoline and diesel fuel and would represent a short-term use of readily available resources. Potential construction impacts would be less than significant, and no mitigation is required. Operational energy demand includes natural gas and electricity. As shown in Table 4.6.B, buildout associated with the proposed Specific Plan would result in approximately 97,301,371 kWh of electricity per year, which would increase the annual electricity consumption in Madera County by approximately 5.8 percent. In addition, buildout associated with the proposed Specific Plan would result in approximately 2,614,489 therms of natural gas per year, which would increase the annual natural gas consumption in Madera County by approximately 4.6 percent. This would represent a decrease in per capita energy usage. As discussed above, the proposed Specific Plan encourages future development to exceed Title 24 standards and encourages the following energy efficiency strategies (which would be required to be implemented as part of Mitigation Measure EN-1.1): • Provide natural lighting, where feasible, to reduce reliance on artificial lighting. • Use Low-E or EnergyStar windows. • Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels. • Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation. • Implement some of the strategies of the EnergyStar program. • For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs. • In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel-efficient vehicles. • Future development under the proposed Specific Plan would be required to meet the provisions included in the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6) and the CALGreen Code (Title 24, Part 11) for the year in which development is constructed. Additionally, because developments that would be considered under the proposed Specific Plan have not been designed or proposed at this time, potential improvements to the current energy and natural gas facilities would be identified at the time such projects are proposed. Therefore, with adherence to Title 24 regulations and the strategies included in the proposed Specific Plan, implementation of the proposed Specific Plan is considered consistent with this item.

Table 4.6.C: Proposed Specific Plan Comparison to State CEQA Guidelines Appendix F

Appendix F Items for Consideration	Proposed Specific Plan
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.	**Consistent.** Future development facilitated by implementation of the proposed Specific Plan would be required to meet the provisions included in the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6) and the CALGreen Code (Title 24, Part 11) and would be required to comply with the strategies included in the proposed Specific Plan that are aimed at reducing energy consumption. The demand for energy supplies associated with implementation of the Specific Plan would be greater than existing conditions, but would remain within the forecasted demands for each utility. In the event that new energy facilities are needed at a later date, such discretionary projects would be required to undergo a separate CEQA review process and their impacts would be assessed at that time. The proposed Specific Plan is considered consistent with this item.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.	**Consistent.** Future projects developed under the plan would implement a variety of energy conservation measures that would be consistent with strategies included in the proposed Specific Plan that are aimed at reducing energy consumption and would also be required to meet the California Energy Code Building Energy Efficiency Standards contained in Title 24 (Part 6). Additionally, because developments that would be considered under the proposed Specific Plan have not been designed or proposed at this time, potential improvements to the current energy and natural gas facilities would be identified at the time such discretionary projects are proposed and under review. Future discretionary projects would be required to undergo a separate CEQA review process and their impacts on peak and base period demands would be assessed at that time. Therefore, the proposed Specific Plan is considered consistent with this item.
4. The degree to which the project complies with existing energy standards.	**Consistent.** Future development under the proposed Specific Plan would be required to be consistent with strategies included in the proposed Specific Plan that are aimed at reducing energy consumption and would also be required to meet the provisions included in the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6) and the CALGreen Code (Title 24, Part 11). For example, new projects associated with the implementation of the proposed Specific Plan would be required to comply with the Building Energy Efficiency Standards for Residential and Non-Residential Buildings that are in place at the time new development is proposed. These standards are updated, with the latest update (2019) that went into effect on January 1, 2020. Future discretionary projects would be required to undergo a separate CEQA review process and their compliance to existing energy standards would be assessed at that time. Therefore, the proposed Specific Plan is considered consistent with this item.

Table 4.6.C: Proposed Specific Plan Comparison to State CEQA Guidelines Appendix F

Appendix F Items for Consideration	Proposed Specific Plan
5. The effects of the project on energy resources.	**Consistent.** Energy use during construction of future development facilitated by the proposed Specific Plan would primarily involve gasoline and diesel fuel and would represent a short-term use of readily available resources. As discussed above, potential construction would have a negligible effect on local and regional energy supplies, and no mitigation is required. Operational energy demand includes natural gas and electricity. As shown in Table 4.6.B, buildout associated with the proposed Specific Plan would result in approximately 97,301,371 kWh of electricity per year, which would increase the annual electricity consumption in Madera County by approximately 5.8 percent. In addition, buildout associated with the proposed Specific Plan would result in approximately 2,614,489 therms of natural gas per year, which would increase the annual natural gas consumption in Madera County by approximately 4.6 percent. As discussed above, the proposed Specific Plan encourages future development to exceed Title 24 standards and encourages the following energy efficiency strategies: • Provide natural lighting, where feasible, to reduce reliance on artificial lighting. • Use Low-E or EnergyStar windows. • Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels. • Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation. • Implement some of the strategies of the EnergyStar program. • For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs. • In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel-efficient vehicles. Future development under the proposed Specific Plan would be required to meet the provisions included in the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6) and the CALGreen Code (Title 24, Part 11). Additionally, because developments that would be considered under the proposed Specific Plan have not been designed or proposed at this time, potential improvements to the current energy and natural gas facilities would be identified at the time such projects are proposed. Therefore, with adherence to Title 24 regulations and the strategies included in the proposed Specific Plan, implementation of the proposed Specific Plan is considered consistent with this item.

Table 4.6.C: Proposed Specific Plan Comparison to State CEQA Guidelines Appendix F

Appendix F Items for Consideration	Proposed Specific Plan
6. The project's anticipated transportation energy use requirements and its overall use of efficient transportation alternatives.	Implementation of the Specific Plan would create a transportation network that would fulfill the policies of the Madera General Plan's Circulation Element by allowing residents to live within proximity to schools, recreational opportunities, retail centers, and commercial development, and minimizing vehicle trips through utilizing access to a variety of transportation opportunities, including pedestrian pathways, bikeways, regional arterials, and transit. In addition, the Specific Plan encourages the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel efficient vehicles in retail, commercial, and office development.

Source: LSA (March 2020).

Future projects facilitated by implementation of the proposed Specific Plan would be required to comply with federal, State, and local regulations aimed at reducing energy consumption. In addition, the proposed Specific Plan encourages future development to exceed Title 24 standards and encourages the following energy efficiency strategies (which would be required through implementation of Mitigation Measure EN-1.1):

- Provide natural lighting, where feasible, to reduce reliance on artificial lighting.
- Use Low-E or EnergyStar windows.
- Use high-efficiency lighting systems with advanced lighting controls. For nonresidential buildings, consider providing motion sensors tied to dimmable lighting controls. Task lighting may be used to reduce general overhead light levels.
- Use a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Consider using light colors for roofing and wall finish materials, and installing high R-value wall and ceiling insulation.
- Implement some of the strategies of the EnergyStar program.
- For retail, commercial and office uses, use light colored roofing with a high solar reflectance to reduce the heat island effect from roofs.
- In retail, commercial and office development, encourage the provision of preferred parking spaces for hybrid, fuel cell, electric and/or other fuel-efficient vehicles.

These strategies have been developed in accordance with federal and State energy regulations, such as the California Energy Code Building Energy Efficiency Standards (Title 24, Part 6), the CALGreen Code (Title 24, Part 11), and SB 743, which are also aimed at reducing energy consumption. Therefore, the proposed Specific Plan would be consistent with applicable plans related to renewable energy and energy efficiency, and no mitigation would be required.

Level of Significance Without Mitigation: Less than significant. No mitigation is required.

4.6.2.3 Cumulative Impacts

The proposed Specific Plan would have a significant effect on the environment if it – in combination with other projects – would contribute to a significant cumulative impact related to energy.

Development of cumulative projects within the PG&E service area which encompasses 70,000 square miles would result in a substantial increase in electricity and natural gas demand as well as an increase in the consumption of fuel for vehicles. Although the proposed project would result in a net increase in demand for electricity, implementation of the proposed Specific Plan would not result in the construction of new electric or natural gas infrastructure beyond what has already been assumed and will be included in PG&E's regional forecasts. Additionally, because developments that would be considered under the proposed Specific Plan have not been designed or proposed at this time, potential improvements to the current energy and natural gas facilities would be identified at the time such projects are proposed. In the event that new energy facilities are needed at a later date, such discretionary projects would be required to undergo a separate CEQA review process and their impacts would be assessed at that time.

As discussed previously, the total annual electricity consumption in the PG&E service area in 2018 was 80,368.7 GWh (80,368,674,613 kWh). As shown in Table 4.6.B, the estimated potential increase in electricity demand associated with the operation of the proposed Specific Plan is 97,301,371 kWh per year. Therefore, operation of the proposed Specific Plan would increase the annual electricity consumption in the PG&E service area by approximately 0.1 percent. As such, the proposed project's share of cumulative electricity consumption would negligible but would result in a total decrease in per capita energy consumption. Total natural gas consumption in the PG&E service area in 2018 was 4,794.4 million therms (4,794,354,461 therms). As shown in Table 4.6.B, the estimated potential increase in natural gas demand associated with the proposed Specific Plan is 2,614,489 therms per year. Therefore, operation of the proposed Specific Plan would increase the annual natural gas consumption in the PG&E service area by approximately 0.1 percent. The proposed project's share of cumulative consumption of natural gas in the PG&E service area would be negligible.

In addition, as identified above, PG&E demand forecasts include the growth contemplated by the proposed project and the related projects. The jurisdictions throughout the PG&E service area are working with the State to reduce the consumption of energy. The proposed Specific Plan encourages future development projects within the Specific Plan to exceed Title 24 standards and encourages the energy efficiency strategies as listed above.

Given that development within the Specific Plan Area would be required to adhere to these strategies, future development in the Specific Plan Area would not contribute to potential cumulative impacts associated with the potential inefficient, wasteful and unnecessary consumption of energy within other parts of the PG&E service area. Furthermore, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. PG&E plans to continue to provide reliable service to their customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, as described above, horizon year VMT per service population for the project is 20.1 percent lower than the existing (2019) regional average. The project's horizon year VMT per employee is 35.6 percent lower than existing (2019) regional average. As the project's horizon year VMT is below that of the regional average and the proposed project would not result in a significant impact on gasoline demand. Moreover, the fuel efficiency of vehicles is expected to continue to increase and improve throughout the life of the project as new fuel economy standards are established.

Furthermore, implementation of the Specific Plan would create a transportation network that would fulfill the policies of the Madera General Plan's Circulation Element by allowing residents to live within proximity to schools, recreational opportunities, retail centers, and commercial development, and minimizing vehicle trips through utilizing access to a variety of transportation opportunities, including pedestrian pathways, bikeways, regional arterials, and transit. Therefore, implementation of the proposed Specific Plan would result in a less-than-significant cumulative impact related to the inefficient, wasteful and unnecessary consumption of energy.

Level of Significance Without Mitigation: Less than significant. No mitigation is required.

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