

4.5 ENERGY

This chapter describes the regulatory framework and existing conditions of the City of San Mateo Environmental Impact Report (EIR) Study Area and evaluates the potential energy impacts from adopting and implementing the proposed General Plan 2040 and proposed Climate Action Plan (CAP) update, and from future development and activities that could occur under the proposed project. Section 21100(b)(3) of CEQA requires that an EIR include a detailed statement with 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. Appendix F of State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project’s energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in the project description, environmental setting, and impact analysis portions of technical sections, as well as through mitigation measures and alternatives.

In accordance with Appendices F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the proposed project. This section summarizes the proposed anticipated energy needs, impacts, and conservation measures associated with future development and activities under the proposed project. The information in this section and other aspects of the proposed General Plan’s energy implications are also discussed in Chapter 3, *Project Description*, Chapter 4.2, *Air Quality*, Chapter 4.7, *Greenhouse Gas Emissions*, and Chapter 4.15, *Transportation*, of this Draft EIR.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of United States crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule

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for Model Years 2021 through 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles. On March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards, which will increase fuel efficiency 8 percent annually for model years 2024 to 2025 and 10 percent annually for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which will be a 10 MPG increase relative to model year 2021.¹

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The act sets increased CAFE Standards; the Renewable Fuel Standard; appliance energy-efficiency standards; building energy-efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.²

Energy Policy Act of 2005

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

National Energy Policy

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

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well

¹ National Highway Traffic Safety Administration, April 1, 2022, USDOT Announces New Vehicle Fuel Economy Standards for Model year 2024-2026, <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>, accessed October 24, 2022.

² United States Environmental Protection Agency, updated May 12, 2022, Summary of the Energy Independence and Security Act, <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>, accessed October 24, 2022.

as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the United States Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

State Regulations

Warren-Alquist Act

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2023.

California Energy Commission

The California Energy Commission (CEC) was created in 1974 under the Warren-Alquist Act as the State's principal energy planning organization in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

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

California Public Utilities Commission

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

- All new residential construction in California will be zero net energy by 2020;³
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and

³ Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

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- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.⁴

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

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

Renewable Portfolio: Carbon Neutrality Regulations

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill (SB) 1078 and was amended in 2006, 2011, and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S 14 08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the California legislature in 2011 (SB X1-2). The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the state.

⁴ California Public Utilities Commission, January 2011, CA Energy Efficiency Strategic Plan, <https://www.cpuc.ca.gov/-/media/cpuc-website/files/legacyfiles/c/5303-caenergyefficiencystrategicplan-jan2011.pdf>, accessed February 7, 2023.

Senate Bill 350

Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill also establishes an overall State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Senate Bill 1020

SB 1020 was signed into law on September 16, 2022. It requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035 and 95 percent by 2040. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

Energy Efficiency Regulations

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.⁵

⁵ California Energy Commission, 2017, *2016 Appliance Efficiency Regulations*, <https://pdf4pro.com/cdn/2016-appliance-efficiency-regulations-5104f7.pdf>, accessed February 7, 2023.

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California Building Energy Code: Title 24, Part 6, Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2022 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020. The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less in height. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.⁶ Under the 2019 standards, nonresidential buildings are generally 30 percent more energy efficient compared to the 2016 standards, and single-family homes are generally 7 percent more energy efficient.⁷ When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.⁸

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards became effective and replaced the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers.⁹

California Building Code: Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code (CBSC). It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier

⁶ California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

⁷ California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

⁸ California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

⁹ California Energy Commission, 2021, Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.

places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2022. The 2022 CALGreen update, which was approved as part of 2022 Energy Code became effective on January 1, 2023, and provides updates to the residential and non-residential voluntary measures.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.¹⁰

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601 through 1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. They contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.

Off-road Equipment and Transportation-Related Regulations

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under *Federal*, above). In January 2012, the California Air Resources Board approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single

¹⁰ California Building Standards Commission, July 2022, *2022 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11*, <https://codes.iccsafe.org/content/CAGBC2022P1/copyright>, accessed December 12, 2022.

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package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.¹¹

Title 13, Chapter 9, Article 4.8, Section 2449

Section 2449 of the California Code of Regulations, Title 13, Chapter 9, Article 4.8 was adopted on May 2, 2008 that limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Association of Bay Area Governments (ABAG) is the MPO for the Bay Area region, which includes the city of San Mateo. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

Executive Order N-79-20

On September 23, 2020, Executive Order N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs (zero-emission vehicles) sold in California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.
- Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.

¹¹ California Air Resources Board, January 18, 2017, California's Advanced Clean Cars Midterm Review, https://ww2.arb.ca.gov/sites/default/files/2020-01/ACC%20MTR%20Summary_Ac.pdf, accessed May 16, 2022.

On August 25, 2022, CARB adopted the Advanced Clean Cars II (ACC II) regulations that codifies the EO goal of 100 percent of in-state sales of new passenger vehicles and trucks be ZE by 2035. Starting in year 2026, ACC II requires that 35 percent of new vehicles sold be ZE or plug-in hybrids.

Advanced Clean Fleets Regulation

In April 2023, CARB released the Advanced Clean Fleets (ACF) regulation to accelerate the transition to zero-emission medium- and heavy-duty vehicles.¹² In conjunction with the Advanced Clean Trucks (ACT) regulation, the ACF regulations helps to ensure that medium- and heavy-duty zero-emission vehicles (ZEV) are brought to the market, by requiring certain fleets to purchase ZEVs. The ACF ZEV phase-in approach which provides initial focus where the best fleet electrification opportunities exist, sets clear targets for regulated fleets to make a full conversion to ZEVs, and creates a catalyst to accelerate development of a heavy-duty public infrastructure network.

The ACF regulations covers four main elements:

- **Manufacturer sales mandate.** Manufacturers may sell only zero-emission medium- and heavy-duty vehicles starting in 2036.
- **Drayage fleets.** Beginning January 1, 2024, trucks must be registered in the CARB Online System to conduct drayage activities in California. Non-zero-emission “legacy” drayage trucks may register in the CARB Online System through December 31, 2023. Legacy drayage trucks can continue to operate through their minimum useful life. Beginning January 1, 2024, only zero-emission drayage trucks may register in the CARB Online System. All drayage trucks entering seaports and intermodal railyards would be required to be zero-emission by 2035.
- **High priority and federal fleets.** High priority and federal fleets must comply with the Model Year Schedule or may elect to use the optional ZEV Milestones Option to phase-in ZEVs into their fleets:
 - **Model Year Schedule:** Fleets must purchase only ZEVs beginning 2024 and, starting January 1, 2025, must remove internal combustion engine vehicles at the end of their useful life as specified in the regulation.
 - **ZEV Milestones Option (Optional):** Instead of the Model Year Schedule, fleets may elect to meet ZEV targets as a percentage of the total fleet starting with vehicle types that are most suitable for electrification.
- **State and local agencies.** State and local government fleets, including city, county, special district, and State agency fleets, would be required to ensure 50 percent of vehicle purchases are zero-emission beginning in 2024 and 100 percent of vehicle purchases are zero-emission by 2027. Small government fleets (those with 10 or fewer vehicles) and those in designated counties would start their ZEV purchases beginning in 2027. Alternately, State and local government fleet owners may elect to meet ZEV targets using the ZEV Milestones Option. State and local government fleets may

¹² California Air Resources Board. April 14, 2023. Advanced Clean Fleets Regulation. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about>, accessed May 16, 2022.

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purchase either ZEVs or near-ZEVs, or a combination of ZEVs and near-ZEVs, until 2035. Starting in 2035, only ZEVs will meet the requirements.

The ACF regulations would also establish requirements that transform the medium- and heavy-duty vehicle sector and demonstrate independent utility through achievement of the following objectives:

- Achieve criteria and GHG emissions reductions consistent with the goals identified in the State Implementation Plan (SIP) Strategy and Scoping Plan.
- Provide emissions reductions in disadvantaged communities (DAC), thereby supporting the implementation of Assembly Bill (AB) 617 (Garcia, C., Chapter 136, Statutes of 2017).
- Support the goals of Executive Order N-79-20 which calls for accelerated ZEV deployment with these targets:
 - 100 percent ZE drayage by 2035
 - 100 percent ZE trucks and buses where feasible by 2045
- Ensure requirements, such as ZEV deployment schedules and related infrastructure build-out, are technologically feasible, cost-effective, and support market conditions.
- Lead the transition away from petroleum fuels and towards electric drivetrains.
- Contribute towards achieving carbon neutrality in California pursuant to Senate Bill (SB) 100, and in accordance with Executive Order B-55-18.
- Mindfully set requirements to allow time for public ZE infrastructure buildout for smaller fleets or for regional haul applications who would be reliant on a regional network of public chargers.
- Ensure manufacturers and fleets work together to place ZEVs in service suitably and successfully as market expands.
- Establish a fair and level playing field among fleet owners.
- Craft the Proposed Project in a way that ensures institutional capacity for CARB to manage, implement, and enforce requirements.

Energy Storage

California has set ambitious long-term goals for energy storage beyond 2026 to support its clean energy and climate goals. The state aims to reach 100 percent carbon-free electricity by 2045, which will require significant investment in renewable energy sources like wind and solar, as well as energy storage technologies to balance the variability of these sources.

The California Independent System Operator (CAISO) has a total energy storage capacity of more than 3,160 megawatts (MW) as of June 2022.¹³ This includes both large-scale and distributed energy storage systems, such as batteries, pumped hydroelectric storage, and thermal storage. CAISO is responsible for managing the electricity grid for much of California, and it has set a target of adding 3,300 MW of additional energy storage capacity by 2024 to support the integration of more renewable energy sources like wind and solar. As part of SB 100, load serving entities (LSEs) were required to procure no less than

¹³ California Independent System Operator, June 14, 2022, "A golden age of energy storage," <http://www.caiso.com/about/Pages/Blog/Posts/A-golden-age-of-energy-storage.aspx>, accessed May 17, 2023.

1.3 gigawatts (GW) of energy storage capacity by 2020, and 3 GW by 2030. Additionally, the CPUC has established a target of 15 GW of energy storage capacity by 2030.¹⁴

The Integrated Resource Plan (IRP)

CAISO develops a coordinated grid management plan to integrate the generation and storage capacities of LSEs, called the Integrated Resource Plan (IRP). The IRP is a comprehensive planning document that outlines CAISO's forecasts for electricity demand, supply, and transmission needs over a 20-year planning horizon, as well as its strategies for integrating renewable energy resources and other grid services to meet those needs. The plan is developed in collaboration with LSEs, regulators, and other stakeholders, and is updated periodically to reflect changes in the energy landscape and evolving policy goals. Overall, the IRP plays a critical role in ensuring the reliability and resilience of California's electricity grid as the state continues to transition to a cleaner and more sustainable energy system.

When an individual Battery Energy Storage (BES) facility or generation infrastructure (i.e., solar panels) comes online in California, it is typically included in the IRP through a process known as the Interconnection Queue. The Interconnection Queue is managed by the CAISO, which oversees the operation of the State's electricity grid.

The Interconnection Queue

The Interconnection Queue is an application process that functions as a waiting list of proposed electricity generation and storage projects that are seeking to connect to the grid. When a new BES facility or generation infrastructure is proposed, the developer submits an application to CAISO to request an interconnection to the grid. CAISO evaluates the application to ensure that the facility meets technical and operational requirements, such as voltage regulation and frequency response, and that it can be integrated effectively into the grid.

Once the BES facility or generation infrastructure is approved by CAISO, it is assigned a point of interconnection on the grid, and its output is added to the IRP as a resource that can provide electricity and other grid services, such as frequency regulation or ramping support. The facility is then dispatched by CAISO based on its bids into the day-ahead and real-time electricity markets, and its output is used to help balance supply and demand on the grid in real-time.

Overall, the Interconnection Queue is an important mechanism for integrating new BES facilities and other electricity resources into the California grid, and for ensuring that the grid remains reliable and resilient as the state continues to transition to a cleaner and more sustainable energy system.

¹⁴ California Public Utilities Commission, December 1, 2022, CPUC Creates New Framework to Advance California's Transition Away From Natural Gas, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>, accessed May 17, 2023.

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Regional Regulations

Plan Bay Area: Strategy for a Sustainable Region

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021.¹⁵ Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented.¹⁶

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the City of San Mateo lies within identified PDAs.¹⁷

Bay Area Clean Air Plan

BAAQMD adopted the 2017 Clean Air Plan, Spare the Air, Cool the Climate on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.

¹⁵ Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [/https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

¹⁶ Association of Bay Area Governments/Metropolitan Transportation Commission, 2021, October. Plan Bay Area 2050. [/https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf](https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf), accessed May 23, 2023.

¹⁷ Association of Bay Area Governments/Metropolitan Transportation Commission, May 2023 (updated), Priority Development Areas, <https://opendata-mtc.opendata.arcgis.com/datasets/4df9cb38d77346a289252ced4ffa0ca0/explore?location=37.892240%2C-122.289021%2C9.00>.

- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.¹⁸

A comprehensive multipollutant control strategy has been developed to be implemented in the next 3 to 5 years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: 1) stationary (industrial) sources; 2) transportation; 3) energy; 4) agriculture; 5) natural and working lands; 6) waste management; 7) water; and 8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
 - Increase efficiency of the energy and transportation systems.
 - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
 - Make the electricity supply carbon-free.
 - Electrify the transportation and building sectors.

City/County Association of Governments of San Mateo County

The City/County Association of Governments (C/CAG) of San Mateo County is responsible for providing countywide transportation planning. In San Mateo County, C/CAG is the Congestion Management Agency tasked with preparing the Congestion Management Plan (CMP) that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and BAAQMD. The CMP contains Level of Service (LOS) standards for roadway segments and intersections, a capital improvement program, a program for analyzing land use decisions, and a transportation demand management (TDM) program.¹⁹ The CMP roadway system comprises of 53 roadway segments and 16 intersections.

Local Regulations

San Mateo General Plan 2030

The City of San Mateo General Plan 2030 goals, policies, and actions that are relevant to energy are primarily in the Urban Design Element. As part of the proposed General Plan, some existing General Plan goals, policies, and actions would be amended, substantially changed, or new policies would be added.

¹⁸ Bay Area Air Quality Management District (BAAQMD), 2017, Spare the Air: Cool the Climate, Final 2017 Clean Air Plan, [https://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en](https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en), accessed May 23, 2023.

¹⁹ City/County Association of Governments of San Mateo County, December 2021, *Congestion Management Program: Final Report*, https://ccag.ca.gov/wp-content/uploads/2022/01/258-018-San-Mateo-CMP-Report_Final.pdf, accessed July 29, 2022.

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Applicable goals and policies are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.5.3, *Impact Discussion*.

2020 Climate Action Plan

Adopted in April 2020, the current San Mateo CAP is a comprehensive strategy to reduce GHG emissions and streamline the environmental review of GHG emissions of future development projects in the city.²⁰ The CAP allows City decision-makers and the community to understand the sources and magnitude of local GHG emissions and identifies a strategy, reduction measures, and implementation actions the City will use to achieve targets consistent with State recommendations of 15 percent below 2005 emissions levels by 2020, 4.3 metric tons of carbon dioxide equivalent (MTCO_{2e}) per person by 2030, and 1.2 MTCO_{2e} per person by 2050. The CAP, adopted in 2020, updated and expanded the City's goals, measures, and actions to address GHG emissions from the energy, water, transportation, solid waste, and off-road equipment sectors. It also revises San Mateo's implementation program and framework to monitor and report progress. A technical update to the CAP, which builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279, has been conducted as part of the proposed project.

City of San Mateo Municipal Code

The SMMC includes various directives pertaining to energy. The SMMC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to energy impacts are included in Title 23, *Buildings and Construction*.

- Chapter 23.12, *Electrical Code*, adopts the 2022 California Electrical Code as the rules, regulations, and standards within the City as to all matters except as modified or amended in the SMMC.
- Chapter 23.24, *Energy Code*, adopts the 2022 edition of the California Energy Code, and includes amendments regarding mandatory solar installations, all-electric requirements and energy efficiency standards.
- Chapter 23.44, *Electrical Vehicle Charging Stations*, outlines the requirements and submittal process of an electric vehicle charging permit application.
- Chapter 23.70, *Green Building Code*, adopts the 2022 edition of the California Green Building Standards Code, and includes local amendments regarding electric vehicle charging and space design for different types of new constructions.

²⁰ City of San Mateo, April 2020, *2020 Climate Action Plan*, cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=, accessed May 25, 2023.

4.5.1.2 EXISTING CONDITIONS

Electricity and Natural Gas

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh), and natural gas is measured in therms. A therm is a measurement of the amount of heat energy in natural gas, equal to 100,000 British thermal units (BTUs). The volumetric billing unit used for natural gas delivered to customers is typically expressed in hundreds of cubic feet (Ccf)—approximately 0.01 therm per Ccf—or thousands of cubic feet (Mcf)—approximately 10.37 therms per Mcf.²¹ A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for one hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC's "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 280,738 gigawatt hours in 2021.²² A gigawatt is equal to one million kilowatts.

Energy Providers

Two energy providers, Peninsula Clean Energy (PCE) and Pacific Gas & Electric (PG&E), serve the EIR Study Area, as described below.

Peninsula Clean Energy (PCE)

PCE was created as a Community Choice Aggregation (CCA) program by San Mateo County in 2016 and all of its cities and town, and was joined by the City of Los Banos in 2020.²³ PCE aims to provide electricity that is 100 percent renewable or carbon-free by 2025. PCE provides two different production options for electricity: ECOplus and ECO100.

Sources of electricity sold by PCE under the ECOplus plan in 2021, the latest year for which data are available, were:²⁴

- 49.2 percent renewable, consisting mostly of solar and wind
- 50.8 percent large hydroelectric

Customers are automatically enrolled in ECOplus but have the option of opting up to ECO100, which provides 100 percent renewable and carbon-free electricity.²⁵ Conversely, customers have the option to opt-out of PCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies within the PCE service area.

²¹ United States Energy Information Administration, June 1, 2021, Frequently Asked Questions (FAQs), <https://www.eia.gov/tools/faqs/faq.php?id=45&t=7>, accessed May 25, 2023.

²² California Energy Commission, Electricity Consumption by Planning Area. <http://www.ecdms.energy.ca.gov/elecbyplan.aspx>, accessed February 20, 2023.

²³ Peninsula Clean Energy, Background, <https://www.peninsulacleanenergy.com/background/>, accessed February 7, 2023.

²⁴ Peninsula Clean Energy, 2021 Energy Mix, <https://www.peninsulacleanenergy.com/power-mix/>, accessed February 7, 2023.

²⁵ Peninsula Clean Energy, Energy Choices, <https://www.peninsulacleanenergy.com/energy-choices/>, accessed February 7, 2023.

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Pacific Gas and Electric Company

Electricity

PG&E is a publicly traded utility company which generates, purchases, and transmits energy and natural gas under contract with the CPUC. PG&E's service territory is 70,000 square miles, roughly extending north to Eureka, south to Bakersfield, west to the Pacific Ocean, and east to the Sierra Nevada mountain range. PG&E's electricity distribution system consists of 106,681 circuit-miles of electric distribution lines and 18,466 circuit-miles of interconnected transmission lines.²⁶ PG&E owns and maintains above-ground networks of electric transmission and distribution facilities throughout the EIR Study Area.

PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, also known as solar farms. The bulk electric grid (collectively referred to as "The Grid") is a network of high-voltage transmission lines, linked to power plants within the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

Natural Gas

PG&E gas transmission pipeline systems serve approximately 4.5 million gas customers in northern and central California.²⁷ The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. PG&E also adopted Pipeline 2020 program, which aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders. Total natural gas consumption in PG&E's service area was 449,302,071,200 kilo-BTU (KBTU) for 2021.²⁸

In 2021, roughly half of PG&E's energy generated came from renewable resources including biopower, geothermal, small hydroelectric, solar, and wind power. PG&E's portfolio consist of 7 percent natural gas, 39 percent non-emitting nuclear generation, 4 percent large hydroelectric facilities, and 50 percent eligible renewable energies, which includes small hydroelectric and wind.²⁹

²⁶ Pacific Gas and Electric Company, 2023, *Company profile*. https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed May 18, 2023.

²⁷ Pacific Gas and Electric Company, 2022. *Company profile*. https://www.pge.com/en_US/about-pge/company-information/profile/profile.page, accessed May 18, 2023.

²⁸ California Energy Commission, 2021, Gas Consumption by Planning Area. <http://www.ecdms.energy.ca.gov/gasbyplan.aspx>, accessed May 18, 2023.

²⁹ Pacific Gas & Electric Company, 2022, Exploring clean energy solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page#:~:text=In%202021%2C%20roughly%20half%20of,nuclear%20and%20large%20hydroelectric%20power., accessed May 18, 2023.

PG&E and PCE’s together provide electrical services in San Mateo. PG&E is the sole provider for natural gas services to the city. PG&E provides distribution of electrical services to the city, while PCE provides the electrical commodity. PCE works in conjunction with PG&E to provide electricity to consumers through the use of PG&E’s distribution infrastructure and network. Both utilities are regulated by CPUC.

The existing electricity and natural gas consumption attributable to nonresidential and residential land uses in the City of San Mateo is shown in Table 4.5-1, *Estimated Existing Electricity and Natural Gas Demand*.

TABLE 4.5-1 ESTIMATED EXISTING ELECTRICITY AND NATURAL GAS DEMAND

Parameter	Electricity Usage (kWh/year) ^a	Natural Gas Usage (Therms/year) ^a
Residential	196,275,977	16,052,739
Nonresidential	339,037,558	9,376,292
Total	535,313,535	25,429,031
2019 Service Population ^b		170,460
Per Service Population Consumption	3,140	149

Notes:

a. Based on electricity and natural gas usage inventory as part of the development for the 2023 Climate Action Plan.

b. Service population = residents + jobs.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

Fuel Consumption

California is among the top producers of petroleum in the country, with crude oil pipelines throughout the state connecting to oil refineries in the Los Angeles, the San Francisco Bay, and the Central Valley regions. In addition to producing petroleum, California is also one of the top consumers of fuel for transportation. With this sector accounting for approximately 35 percent of California’s total energy demand in 2020, amounting to approximately 2,355.5 trillion BTUs.³⁰ In addition, in 2020, California’s transportation sector consumed approximately 433 million barrels of petroleum fuels.³¹

Furthermore, according to the California Energy Commission, California’s 2019 fuel sales were approximately 15,365 million gallons of gasoline and 1,756 million gallons of diesel.³² In San Mateo County, approximately greater than 322 million gallons of gasoline and 38 million gallons of diesel fuel were sold in 2019.³³

³⁰ United States Energy Information Administration, 2020, *Table F33: Total Energy Consumption, Price, and Expenditure Estimates*, https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf, accessed May 18, 2023.

³¹ United States Energy Information Administration, 2020, *Table F16: Total Petroleum Consumption Estimates*, https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_te.pdf, accessed May 18, 2023.

³² California Energy Commission, 2023, *California Retail Fuel Outlet Annual Reporting (CEC-A15) Results*, <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>, accessed May 18, 2023.

³³ California Energy Commission, 2023, *California Annual Retail Fuel Outlet Report Results (CEC-A15)*, <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>, accessed May 18, 2023.

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Table 4.5-2, *Existing Operation-Related Annual Vehicles Miles Traveled*, shows the estimated annual vehicle miles traveled (VMT) currently generated under existing baseline conditions. VMT is based on vehicle trips beginning and ending in the EIR Study Area and from external/internal trips (i.e., trips that either begin or end in the EIR Study Area).

TABLE 4.5-2 EXISTING OPERATION-RELATED ANNUAL VEHICLE MILES TRAVELED

Gas VMT ^a	Diesel VMT ^a	Compressed Natural Gas VMT ^a	Electricity VMT ^a
663,327,020	25,765,890	431,400	15,195,810

Note:

a. Based on VMT analysis as part of the development for the proposed Climate Action Plan update.

Source: EMFAC2021, version 1.0.2. See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

4.5.2 STANDARDS OF SIGNIFICANCE

The proposed General Plan would result in a significant energy 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.
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.
3. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

To determine whether the proposed General Plan would result in wasteful, inefficient, or unnecessary consumption of energy resources, this analysis utilizes the guidance provided in Appendix F of the CEQA Guidelines as well as the analytical precedent set by *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168).

According to Appendix F of the CEQA Guidelines, the goal of conserving energy is translated to include decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources. In *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168), the Appellate Court concluded that the analysis of wasteful, inefficient, and unnecessary energy consumption was not adequate because it did not consider whether additional renewable energy features could be added to the project.

The proposed General Plan would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and the Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) (75 Cal.App.5th 63, 164-168), the proposed General Plan would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources.

The following is a summary of the assumptions used for the City’s energy analysis:

- **Energy (Natural Gas and Electricity):** Energy use for residential and nonresidential land uses in the city were modeled using electricity and natural gas data provided by PG&E and PCE. Residential energy and non-residential energy forecasts are adjusted for increases in housing units and employment, respectively.
- **On-Road Fuel Use:** Daily VMT was used as an indicator of fuel use and was based on Origin-Destination Method VMT provided by Kittelson and Associates (see Chapter 4.15, *Transportation*, of this Draft EIR). The VMT provided includes the full trip length for land uses in the City (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips, consistent with the recommendations of CARB’s Regional Targets Advisory Committee. Annual VMT was based on the VMT analysis as part of the development for the 2023 Climate Action Plan. Due to varying conditions that influence fuel consumption, such as vehicle fuel type and fuel economy, VMT generation is utilized herein as a performance metric to measure anticipated fuel consumption during baseline (2019) and future (2040) conditions. At the programmatic level, it is speculative to discuss the specific types of vehicles and fuels that would be used and consumed during operation of future development and activities under the proposed project.

4.5.3 IMPACT DISCUSSION

ENE-1	The proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
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Short-Term Construction Impacts

Future development projects under the proposed project would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that most electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

Construction of development projects facilitated by the proposed General Plan would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that most off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction. Furthermore, the construction contractors would be required to minimize nonessential idling of construction equipment during

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construction in accordance with the California Code of Regulations Title 13, Chapter 9, Article 4.8, Section 2449. Such required practices would limit wasteful and unnecessary energy consumption.

Also, future projects within the EIR Study Area would be similar to projects currently in development within the EIR Study Area. Overall, there would be no unusual project characteristics anticipated that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, short-term construction activities that occur as a result of implementation of the proposed General Plan would not result in inefficient, wasteful, or unnecessary fuel consumption.

Long-Term Impacts During Operation

Decreasing Overall Per Capita Energy Consumption

Operation of future development under the proposed project would create additional demands for electricity and natural gas compared to existing conditions. Operational use of electricity and natural gas would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; lighting; and charging electric vehicles. Land uses under the proposed General Plan would also result in additional demands for transportation fuels (e.g., gasoline, diesel, compressed natural gas, and electricity) associated with on-road vehicles.

Building Electricity

Electrical service to the EIR Study Area is provided by PG&E and PCE through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 4.5-3, *Year 2040 Forecast Electricity Consumption*, by horizon year 2040, electricity use in the EIR Study Area would increase by 177,799,653 kWh/year, or approximately 33 percent, from existing conditions.

TABLE 4.5-3 YEAR 2040 FORECAST ELECTRICITY CONSUMPTION

Land Use	Electricity Usage (kWh/year) ^a		
	Existing Conditions	Proposed General Plan	Net Change
City			
Residential	190,128,160	286,083,820	95,955,660
Nonresidential	333,200,500	413,129,990	79,929,490
SOI			
Residential	6,147,817	6,195,622	47,805
Nonresidential	5,837,058	7,703,756	1,866,698
Total	535,313,535	713,113,188	177,799,653
Service Population	170,460	239,400	68,940
Per Service Population Annual Consumption	3,140	2,979	-161

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As a result, the per service population electricity consumption was estimated to decrease from 3,140 kWh per person per year in 2019 to 2,979 kWh per person per year in 2040, or a reduction of approximately 161 kWh annually. The 2040 electricity consumption estimates reflect the electricity consumption rates of the existing community which is made up of a building stock that consists of varying ages and energy efficiency performances. The EIR Study Area is largely built out and net new development would largely occur through the renovation, expansion, and replacement of existing development. All new development facilitated by the proposed General Plan would be required to demonstrate compliance with the California Building Energy Efficiency Standards and CALGreen standards in effect at the time the individual development applications are submitted and can therefore be expected to be more energy-efficient than the use being replaced, resulting in reductions in electricity consumption on a per dwelling unit and per square foot basis when compared to existing development. It should be noted that it is unknown how much more energy-efficient future iterations of the California Building Energy Efficiency Standards and CALGreen would be in 2040 compared to existing conditions as those code updates are released on a 3-year cycle.

The Land Use (LU) and Community Design and Historic Resources (CD) Element of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider energy efficiency and impacts. The following General Plan 2040 goals and policies would serve to improve energy efficiency and reduce energy:

- **Goal LU 10:** Make San Mateo strong and resilient by acting to significantly reduce greenhouse gas emissions and adapt to a changing climate.
 - **Policy LU 10.2: Decarbonized Building Stock.** Eliminate the use of fossil fuels as an energy source in all new building construction and reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric construction.
- **Goal CD-6:** Develop and maintain an attractive urban fabric that reflects San Mateo’s unique visual and architectural character.
 - **Policy CD 6.3: Sustainable Design.** Encourage integration of sustainable design features and elements into the design of new buildings, including locating and orienting buildings to access solar exposure, preserving mature vegetation to the extent feasible, and using green building materials.

As a result of compliance with Title 24 energy efficiency standards and implementation of the above General Plan goals and policies, per service population building electricity consumption is expected to decrease in 2040 compared to existing conditions.

Building Natural Gas

As shown in Table 4.5-4, *Year 2040 Forecast Natural Gas Consumption*, natural gas use under the proposed project is estimated to total 35,820,745 therms annually. While the City currently has a reach code requiring all-electric building designs for most new projects (SMMC Section 23.70.060), it cannot be guaranteed that every individual development project facilitated by the proposed project would be subject to this requirement. To provide a conservative assessment of what energy consumption may be

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in 2040 resulting from implementation of the proposed project, the new growth in building space anticipated through 2040 was assumed to include natural gas for space and water heating. With this assumption, by 2040, natural gas use in the EIR Study Area would increase by 10,391,714 therms annually, or approximately 41 percent, from existing conditions. As a result, the per service population natural gas consumption is estimated to slightly increase from 149 therms per person per year in 2019 to 150 therms per person per year in 2040 for natural gas. As described above, this number can be considered to represent a conservative (i.e., “worst case” scenario) as many projects in the city would be subject to the reach code’s all-electric requirements.

TABLE 4.5-4 YEAR 2040 FORECAST NATURAL GAS CONSUMPTION

Land Use	Natural Gas Usage (Therms per year) ^a		
	Existing Conditions	Proposed General Plan	Net Change
City			
Residential	15,549,930	23,397,810	7,847,880
Nonresidential	9,195,040	11,677,000	2,481,960
SOI			
Residential	502,809	506,719	3,910
Nonresidential	181,252	239,216	57,964
Total	25,429,031	35,820,745	10,391,714
Service Population	170,460	239,400	68,940
Per Service Population Annual Consumption	149	150	1

Note:

a. Residential energy and nonresidential energy forecasts do not account for reductions due to increases in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

Source: See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR

Similar to electricity consumption, all new development facilitated by the proposed General Plan would be required to demonstrate compliance with the current California Building Energy Efficiency Standards and CALGreen and would result in reductions in heating fuel (i.e., natural gas or propane) consumption on a per dwelling unit and per square foot basis when compared to existing development in the city. Moreover, General Plan Policies LU 10.2 and CD 6.3 would serve to improve energy efficiency and reduce energy consumption in new development facilitated by the proposed General Plan. As a result, per service population heating fuel consumption is expected to decrease in 2040 compared to existing conditions; however, as shown in Table 4.5-4, the proposed project would result in a slight increase in per service population natural gas consumption rates by 1 therm annually, largely due to the growth in nonresidential development envisioned by the proposed project.

Transportation Energy

The growth accommodated under the General Plan 2040 would consume transportation energy from the use of motor vehicles (e.g., gasoline, diesel, compressed natural gas, electricity). As shown in Table 4.5-5, *Year 2040 Forecast Miles Traveled*, implementation of the proposed General Plan would increase daily VMT from 3,918,221 in 2019 to 5,108,862 vehicle miles per day in 2040 in the EIR Study Area, or an increase of approximately 30 percent. Service population would also increase under the proposed project, from approximately 170,460 people to 239,400 people, or an increase of approximately 40

percent. As a result, per person daily VMT would decrease from approximately 22.99 miles traveled to approximately 21.34 miles traveled daily.

TABLE 4.5-5 YEAR 2040 FORECAST MILES TRAVELED

Land Use	Existing Conditions	Proposed General Plan	Net Change
Gasoline			
VMT ^a	663,327,020	254,218,670	-409,108,350
Diesel			
VMT ^a	25,765,890	2,220,010	-23,545,880
Compressed Natural Gas			
VMT ^a	431,400	13,350	-418,050
Electricity			
VMT ^a	15,195,810	536,126,360	520,930,550
Total VMT	704,720,120	792,578,390	87,858,270
VMT per Day ^b	3,918,221	5,108,862	1,190,641
Service Population	170,460	239,400	68,940
VMT/SP	22.99	21.34	-1.65

Note:

a. Daily VMT was based on VMT analysis as part of the development for the 2023 Climate Action Plan.

b. Daily VMT is provided by Kittelson and Associates, Inc. 2023 VMT from passenger vehicles and trucks that have an origin or destination in the city using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee created under Senate Bill 375.

Source: Based as part of the Climate Action Plan GHG inventory and forecast analysis, See Appendix C, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft EIR.

As previously stated under Section 4.5.2.1, *Methodology*, due to varying conditions that influence fuel consumption, such as vehicle fuel type and fuel economy, VMT generation is utilized herein as a performance metric to measure anticipated fuel consumption during baseline (2019) and future (2040) conditions.

As identified, the proposed project would result in a decrease in daily per person VMT under future (2040) conditions than under existing conditions. As described in Chapter 4.15, *Transportation*, of this Draft EIR, the proposed General Plan includes land use designations, goals, policies, and actions that will help reduce VMT and therefore reduce emissions from automobiles. Please see the impact discussion in Chapter 4.15 for a complete list of these goals, policies, and actions.

Furthermore, the average vehicle fuel economy would improve between 2019 and 2040 as vehicle manufacturers comply with CAFE standards and other fuel economy standards, resulting in lower transportation energy consumption per mile traveled. Therefore, it is anticipated that per person transportation energy consumed would decrease over time as vehicles' fuel efficiency improves.

As show in Table 4.5-3 and Table 4.5-4, the proposed project would result in a decrease in per service population electricity consumption rate of approximately 161 kWh per year and a slight increase in per service population natural gas consumption rate of approximately 1 therm per year. Moreover, as shown in Table 4.5-5, per service population VMT generation would decrease by an estimated 1.65 miles daily from 2019 to 2040 and, combined with improvements in fuel economy standards through 2040, the

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proposed project would result in a decrease in transportation energy consumption. As a result, the proposed project would result in an overall decrease in energy consumption through 2040.

Decreasing Reliance on Fossil Fuels

The proposed General Plan would be considered to conflict with this criterion if it did not take steps to decrease the reliance on fossil fuels. As discussed in Chapter 4.7, *Greenhouse Gas Emissions*, of this Draft EIR, individual development projects under the proposed project would be required to comply with the CBSC current at the time of their building application submittal, including the California Building Energy Efficiency Standards and CALGreen. As the current CBSC is the 2022 CBSC, individual development projects going through the application process today would result in greater energy efficiency than the current performance of existing structures in the city. In addition, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and battery energy storage (BES) infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features.

In addition to improvements in energy efficiency and on-site renewable energy generation and energy storage standards, SB 100 requires that LSEs incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources. By January 1, 2046, all LSEs in California are required to source 100 percent of their in-state electricity sales from renewable and carbon-free sources. As a result, individual development projects accommodated by the proposed General Plan would improve their energy efficiency through compliance with the CBSC current at the time of their building application submittal and LSEs would supply electricity that is increasingly sourced from carbon-free sources. Moreover, consistent with Executive Order N-79-20 and CARB's Advanced Clean Cars II Regulation, which require that 100 percent of in-state vehicle sales starting in 2035 are electric or hybrid electric, vehicles utilized by future residents and employees accommodated by the proposed General Plan are expected to consist more of EVs than what is experienced under existing conditions. In addition, the proposed General Plan includes policies and actions that are intended to reduce the use of nonrenewable energy. Specifically, proposed Policy LU 10.2 and Action LU 10.10, listed above, encourage the reduction of nonrenewable energy use and the development and utilization of new energy sources and building electrification. As a result, the proposed project would incrementally decrease reliance on fossil fuel energy resources through 2040.

Increasing Reliance on Renewable Energy

As discussed above, the 2022 CBSC currently includes provisions for development projects to include rooftop photovoltaic systems and battery energy storage (BES) infrastructure or demonstrate energy efficiency performance equivalent to including photovoltaic and BES features. In addition, it is anticipated that each new code cycle for the CBSC improves on the last one and requires higher performance for energy efficiency and incorporates additional requirements for on-site renewable energy and EV charging infrastructure. Future development projects under the proposed project would therefore result in a net increase from existing conditions in on-site photovoltaic electricity generation and EV charging stations and associated infrastructure, further supporting and accelerating the adoption of EVs and the use of renewable energy in future years.

Similarly, LSEs that serve future development projects under the proposed project, such as PG&E and PCE, would be required to incrementally increase their energy procurement sources to include eligible renewable and carbon-free sources through 2045 under SB 100. As a result, electricity consumed by individual development projects under the proposed project as well as existing structures in the EIR Study Area would rely more on renewable and carbon-free sources for electricity in future years than is experienced under existing conditions.

The Circulation (C) and Land Use (LU) Elements of the proposed General Plan contain goals, policies, and actions that require local planning and development decisions to consider renewable resources and active modes of transportation. The following General Plan 2040 goals and policies would support the use of renewable energy resources:

- **Goal C-1:** Design and implement a multimodal transportation system that prioritizes walking, bicycling, and transit, and is sustainable, safe, and accessible for all users; connects the community using all modes of transportation; and reduces vehicle miles traveled (VMT) per capita.
 - **Policy C 1.1: Sustainable Transportation.** Reduce greenhouse gas (GHG) emissions from transportation by increasing mode share options for sustainable travel modes, such as walking, bicycling, and public transit.
 - **Policy C 1.2: Complete Streets.** Apply complete streets design standards to future projects in the public right-of-way and on private property. Complete streets are streets designed to facilitate safe, comfortable, and efficient travel for all users regardless of age or ability or whether they are walking, bicycling, taking transit, or driving, and should include landscaping and shade trees as well as green streets stormwater infrastructure to reduce runoff and pollution.
 - **Policy C 1.4: Prioritize Pedestrian and Bicycle Mobility Needs.** Prioritize local pedestrian and bicycle projects that enhance mobility, connectivity, and safety when designing roadway and intersection improvements.
 - **Policy C 1.6: Transit-Oriented Development.** Increase access to transit and sustainable transportation options by encouraging high-density, mixed-use transit-oriented development near the City's Caltrain stations and transit corridors.
 - **Policy C 1.9: Dedication of Right-of-Way for Transportation Improvements.** Require dedication of needed right-of-way for transportation improvements identified in adopted City plans, including pedestrian facilities, bikeways, and trails.
- **Goal C-2:** Use transportation demand management (TDM) to reduce the number and length of single-occupancy vehicle trips through policy, zoning strategies, and targeted programs and incentives.
 - **Policy C 2.1: TDM Requirements.** Require new or existing developments that meet specific size, capacity, and/or context conditions to implement TDM strategies.
- **Goal C-3:** Build and maintain a safe, connected, and equitable pedestrian network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.

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- **Policy C 3.1: Pedestrian Network.** Create and maintain a safe, walkable environment in San Mateo to increase the number of pedestrians. Maintain an updated recommended pedestrian network for implementation. Encourage “superblock” or similar design in certain nodes of the city, such as the downtown, that allows vehicle access at the periphery and limits cut-through vehicles to create pedestrian-focused, car-light spaces.
- **Policy C 3.2: Pedestrian Enhancements with New Development.** Require new development projects to provide sidewalks and pedestrian ramps and to repair or replace damaged sidewalks, in addition to right-of-way improvements identified in adopted City master plans. Encourage new developments to include pedestrian-oriented design to facilitate pedestrian path of travel.
- **Policy C 3.3: Right-of-Way Improvements.** Require new developments to construct or contribute to improvements that enhance the pedestrian experience, including human-scale lighting, streetscaping, and accessible sidewalks adjacent to the site.
- **Goal C-4:** Build and maintain a safe, connected, and equitable bicycle and micromobility network that provides access to community destinations, such as employment centers, transit, schools, shopping, and recreation.
 - **Policy C 4.1: Bicycle Network.** Create and maintain a bicycle-friendly environment in San Mateo and increase the number of people who choose to bicycle.
 - **Policy C 4.3: First- and Last-Mile Connections.** Encourage and facilitate provision of bicycle parking and shared mobility options at transit centers and other community destinations to provide first- and last-mile connections.
 - **Policy C 4.8: Interjurisdiction Coordination.** Continue to coordinate with adjacent jurisdictions and regional partners in the development of connected bicycle and pedestrian facilities and regional trails, as identified in adopted City plans.
- **Goal C-5:** Make transit a viable transportation option for the community by supporting frequent, reliable, cost-efficient, and connected service.
 - **Policy C 5.1: Increase Transit Ridership.** Support SamTrans and Caltrain in their efforts to increase transit ridership.
- **Goal C-6:** Achieve a transportation system that prioritizes user safety, accommodates future growth, reduces VMT per capita, and maintains efficient and safe operations for all modes and all residents.
 - **Policy C 6.2: Circulation Improvement Plan.** Maintain a transportation network that will accommodate future growth, reduce VMT per capita, and equitably implement complete streets.
- **Goal C-7:** Use parking, enforcement, and curb management strategies to effectively administer parking supply and maximize use of public assets.
 - **Policy C 7.4: Bicycle Parking.** Require the provision of bicycle parking as part of new private developments.
- **Goal LU-1:** Plan carefully for balanced growth that provides ample housing that is affordable at all levels and job opportunities for all community members; maximizes efficient use of infrastructure;

limits adverse impacts to the environment; and improves social, economic, environmental, and health equity.

- **Policy LU 1.4: Mixed-Use.** Encourage mixed-use developments to include increased residential components to provide greater proximity between jobs and housing, promote pedestrian activity, and reduce traffic congestion and vehicle miles traveled (VMT).
- **Goal LU-3:** Provide a wide range of land uses, including housing, parks, open space, recreation, retail, commercial services, office, and industrial to adequately meet the full spectrum of needs in the community.
 - **Policy LU 3.7: Visitor Economy.** Collaborate with other Peninsula cities and the San Mateo County/Silicon Valley Convention and Visitors Bureau to support the continued development of the visitor economy of both the city and the region, including lodging, entertainment, recreation, retail, and local events; encourage uses that attract visitors. Incentivize through fee reduction and visitor perks, sustainable modes of travel to and from the city to reduce both the use of air travel and gas-powered vehicles.

Policy LU 3.8: Workplaces. Develop office buildings and business parks to facilitate transit, pedestrian, and bicycle commutes. Provide compact development, mixed uses, and connectivity to transit to reduce vehicle miles traveled (VMT).

Summary

Compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, Renewables Portfolio Standard, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency and reduce building energy demand and transportation-related fuel usage. Additionally, the proposed General Plan includes goals and policies related to land use and transportation planning and design, energy efficiency, public and active transit, and renewable energy generation that will further contribute to minimizing building, transportation-related energy, and nonrenewable sources of energy demands. As stated, buildout that could occur under the proposed project would reduce the per capita transportation energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy sources.

Implementation of proposed policies under the proposed General Plan, in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with growth under the proposed project would decrease overall energy consumption, decrease reliance on fossil fuels, and increase reliance on renewable energy. As such, the energy consumption under the proposed project would not be considered inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

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ENE-2 The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

California Renewables Portfolio Standard Program

The State's electricity grid is transitioning to renewable energy under California's RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), 90 percent by 2035 (SB 1020), 95 percent by 2040 (SB 1020), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 1020 requires all state agencies to procure 100 percent of electricity from renewable energy and zero-carbon resources by 2035.

The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as PG&E and PCE, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. In addition, customers are automatically enrolled in the PCE's ECOplus program which uses approximately 50 percent renewable energy with a goal of 100 percent renewable energy by 2025.³⁴ Even if customers in the EIR Study Area were to opt out of the ECOplus program, and therefore receive all their electricity from PG&E, 33 percent of PG&E's electricity is generated from renewable energy since 2017.³⁵ By 2030, PG&E is set to meet the State's new 60 percent renewable energy mandate set forth in SB 100.

San Mateo Climate Action Plan

As mentioned prior, the City's current CAP was developed and adopted by City Council in April 2020 as a direct update to the 2015 CAP.³⁶ The current CAP provides community-wide emissions forecasts for 2030 and 2050. The current CAP also establishes per-capita GHG emissions targets for years 2030 and 2050 based on the State's recommended per-capita targets for local efforts, which are consistent with SB 32 and EO S-03-05. It also identifies State and local measures to reduce GHG emissions and promote energy efficiency.

The proposed project, which includes a technical update to the City's CAP, builds on the existing CAP's emission reduction strategies and updates the emissions inventory and forecast to align with current legislative reduction targets established by SB 32 and AB 1279. Because the proposed project builds on the existing CAP and does not substantially alter any of the strategies therein, the proposed General Plan

³⁴ Peninsula Clean Energy (PCE), Strategic Plan, <https://www.peninsulacleanenergy.com/strategy/>, accessed February 8, 2023.

³⁵ Pacific Gas and Electric Company (PG&E), Renewable Energy, https://www.pgecorp.com/corp_responsibility/reports/2018/bu07_renewable_energy.html#:~:text=PG%26E%20delivers%20some%20of%20the,and%20various%20forms%20of%20bioenergy, accessed February 8, 2023.

³⁶ City of San Mateo, April 2020, San Mateo 2020: Climate Action Plan, <https://www.cityofsanmateo.org/DocumentCenter/View/80652/2020-Climate-Action-Plan?bidId=>, accessed November 8, 2022.

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would be consistent with the strategies in the CAP. Furthermore, as listed in impact discussion ENE-1, the proposed General Plan includes policies that would contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption, and ensure compliance with State, regional, or local plans for renewable energy.

The land uses accommodated under the proposed General Plan would be required to comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Furthermore, as described for impact discussion ENE-1, the proposed General Plan includes Land Use (LU) and Circulation (C) goals and policies, which would support the statewide goal of transitioning the electricity grid to renewable sources. Therefore, implementation of the proposed General Plan would not conflict with or obstruct implementation of California’s RPS program, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

ENE-3 The proposed project would not, in combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency.

All the development projects within the vicinity of the project’s EIR Study Area are within the service area of PCE and PG&E. These projects would result in a long-term increase in operational energy demand for electricity and natural gas use associated with population growth. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the PCE and PG&E service area would implement the requirements of the Building and Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6) and the California Green Building Code (California Code of Regulations, Title 24, Part 11). Furthermore, new buildings would use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations.

Future development would also increase annual VMT, and thus fuel consumption. However, vehicles would be subject to the USEPA CAFE standards for vehicular fuel efficiency, and average corporate fuel economy continues to increase as a result of State and federal laws, including the Pavley Advanced Clean Cars program. Vehicle turnover also improves the overall fuel economy of California’s vehicle fleets. The proposed General Plan also includes policies to reduce energy use and measures to align with the state’s goals for carbon neutrality. Cumulative impacts would therefore be *less than significant*.

Significance without Mitigation: Less than significant.

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