

### INTRODUCTION

*This section evaluates potential impacts associated with energy consumption and demand that would result from the implementation of the proposed Specific Plan (Proposed Project, Project). The section also provides a description of the regulatory framework governing the management of energy on a federal, state, regional, and local level. Project impacts on energy consumption and demand as well as related mitigation measures have also been provided.*

#### 3.5.1 EXISTING CONDITIONS

##### 3.5.1.1 Electrical Service

Southern California Edison (SCE) provides electricity service to all of Ventura County including the City of Moorpark. Peak demand in the service area is about 19,750 megawatts. Due to the deregulation of the electrical energy market, electricity may be generated by and purchased from any electric generator connected to the electric grid that spans throughout western North America.<sup>1</sup>

Electrical service to the City of Moorpark and the Specific Plan area are provided by 11 SCE high-voltage overhead electrical lines in two separate easements. The westernmost easement carries four 220-kV lines. These lines, referred to as the "Moorpark-Ormond Beach 220-kV lines," run north out of the Moorpark Substation, which is located south of the Project site, onto the Project site, and make a 90-degree turn to the west. These four 220-kV lines carry current three months a year during peak use in the summer months. For the remainder of the year, the lines carry no current. Overall, these lines carry approximately 750 amperes per circuit when in use.<sup>2</sup>

A second easement, located to the east of the Moorpark-Ormond Beach easement, also travels north out of the Moorpark Substation, crossing the Project site in a north-south direction. Seven lines are located within this easement. The lines (from east to west) include the Gabbert 16-kV line; the Saugus-Moorpark-Santa Susana-Torrey 66-kV line; the Moorpark-Pardee No. 3, 2, and 1 220-kV lines; and the Moorpark-Santa Clara No. 1 and No. 2 220-kV lines. These seven circuits are in operation throughout the year; however, line loads do change based on user needs. During the summer months, when electricity demand is the greatest, line loads would be the highest, ranging from 135 amperes on the Gabbert 16-kV

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<sup>1</sup> U.S. Energy Information Administration, <https://www.eia.gov/energyexplained/electricity/delivery-to-consumers.php>, accessed July 5, 2021.

<sup>2</sup> Moorpark-Newbury 66 kV Subtransmission Line Project EIR, Project Description, [https://www.cpuc.ca.gov/Environment/info/esa/moorpark\\_newbury/deir/c03-project\\_description\\_moorpark.pdf](https://www.cpuc.ca.gov/Environment/info/esa/moorpark_newbury/deir/c03-project_description_moorpark.pdf), accessed July 3, 2021.

line, to 340 amperes on the Moorpark-Pardee 220-kV lines. Conversely, during the winter months when electricity demand is lower, line loads will be reduced.<sup>3</sup>

### 3.5.1.2 Natural Gas

The Southern California Gas Company (SoCal Gas) provides natural gas service to the County of Ventura, including the City of Moorpark. The availability of natural gas is based upon recent conditions of gas supply and regulatory policies. As a public utility, SoCal Gas is under the jurisdiction of the California Public Utilities Commission and can be affected by actions of gas supply or the condition under which service is available. Gas service will be provided in accordance with any revised conditions. The regional gas supply is primarily from Texas via the El Paso Gas Company's pipeline to Southern California.

Natural gas is provided to the Specific Plan area from a 4-inch, medium-pressure main in Moorpark Road. Currently, no significant natural gas consumption occurs on the Specific Plan site.

## 3.5.2 REGULATORY FRAMEWORK

### 3.5.2.1 Federal

#### *Energy Policy and Conservation Act*

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing and regularly updating vehicle standards. The U.S. Environmental Protection Agency (US EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the CAFE program, the average fuel economy for new light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 27.5 mpg for the 2012 model year and is proposed to increase to 54.5 by 2025.

#### *Construction Equipment Fuel Efficiency Standard*

US EPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the

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<sup>3</sup> Moorpark-Newbury 66 kV Subtransmission Line Project EIR, Project Description, [https://www.cpuc.ca.gov/Environment/info/esa/moorpark\\_newbury/deir/c03-project\\_description\\_moorpark.pdf](https://www.cpuc.ca.gov/Environment/info/esa/moorpark_newbury/deir/c03-project_description_moorpark.pdf), accessed July 3, 2021.

Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were to be completely phased in by the end of 2015.

### ***Energy Policy Act***

The Energy Policy Act of 1992 was passed to reduce the U.S.'s dependence on foreign petroleum and improve air quality. The act includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The act requires certain federal, State, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the act. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

### ***Energy Independence and Security Act***

The Energy Independence and Security Act of 2007 was designed to improve vehicle fuel economy and help reduce nationwide dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting global climate change. Specifically, it increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard by requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and reduces U.S. demand for oil by setting a national fuel economy standard of 35 mpg by 2020. The Act also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 USC Section 17001 et seq.

### ***U.S. Executive Order (EO) 13693 (Energy Independence and Security Act Expansion)***

In March 2015, EO 13693 Planning for Federal Sustainability in the Next Decade was signed into action. The goal of this EO is to expand on the Energy Independence and Security Act of 2007 and maintain federal leadership in sustainability and GHG emission reductions. The EO includes the following goals related to energy:

- 25 percent reduction in energy use intensity (2015 baseline).
- 30 percent of electricity supply from renewable energy by 2025.
- 25 percent of total building energy (electric and alternative energy) from renewable energy by 2025.

### ***Energy Star Program***

In 1992, the U.S. EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, US EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

#### **3.5.2.2 State**

### ***California Energy Action Plan (Increase Efficient Use of Fuel Supplies)***

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

### ***California Code of Regulations Title 24, Part 6 (Energy Efficiency Standards)***

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a

legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On April 23, 2008, the CEC adopted the 2008 standards, which applied to projects that submitted an application for a building permit on or after January 1, 2010. The CEC adopted the 2008 standards for a number of reasons: (1) to provide California with an adequate, reasonably priced, and environmentally sound supply of energy; (2) to respond to Assembly Bill 32 (AB 32; the Global Warming Solutions Act of 2006), which requires California to reduce its greenhouse gas emissions to 1990 levels by 2020; (3) to pursue the statewide policy that energy efficiency is the resource of choice for meeting California's energy needs; (4) to act on the findings of California's Integrated Energy Policy Report, which indicate that the 2008 Standards are the most cost-effective means to achieve energy efficiency, reduce the energy demand associated with water supply, and reduce greenhouse gas emissions; (5) to meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures in the update of all state building codes; and (6) to meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards. The CEC updates the standards every three years.

The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings whose permit applications are dated on or after January 1, 2020, must comply with the 2019 Standards.<sup>4</sup> Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and residential homes will be 7 percent more energy efficient. When accounting for the electricity generated by the solar photovoltaic system, residences would use 53 percent less energy compared to homes built to the 2016 standards. 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 multi-family buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements. Under the 2019 Standards, nonresidential buildings will be 30 percent more energy-efficient compared to the 2016 Standards, and single-family homes will be seven percent more energy-efficient. 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.

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<sup>4</sup> California Energy Commission website, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>, accessed July 21, 2021.

### ***California Code of Regulations Title 24, Part 11 (Green Building Standards Code)***

The California Green Building Standards Code, which is Part 11 of the Title 24 Building Standards Code, is commonly referred to as the CALGreen Code. The 2019 CALGreen Code is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools, and hospitals) throughout California beginning on January 1, 2014. The 2013 CALGreen Code contained requirements for construction site selection, stormwater control during construction, construction solid waste reduction, indoor water use reduction, building material selection, natural resource conservation, site irrigation conservation, and more. Additionally, this code encourages buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, the CEC believes a green building should achieve at least a 15 percent reduction in energy usage when compared to California's mandatory energy efficiency standards. The updated 2019 CALGreen Code became effective January 1, 2020 and includes new requirements for additions to existing residential and non-residential development.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of EV charging stations in newly constructed attached garages for single-family and duplex dwellings; and
- Installation of EV charging stations at least three percent of the parking spaces for all new multi-family developments with 17 or more units.

### ***Senate Bills 350 and 100***

The California Renewables Portfolio Standard (RPS) program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources. In the 2015 legislative session, the Legislature passed, and the Governor signed, Senate Bill 350 (SB 350), the Clean Energy and Pollution Reduction Act. The legislation requires that, by 2030, 50 percent of all electricity generated and sold to retail customers must be from renewable sources. SB 350

further requires the CEC to establish annual targets for statewide energy efficiency savings and demand reduction that would achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030. The bill requires the Public Utilities Commission (PUC) to establish efficiency targets for investor-owned electrical and gas corporations consistent with the 2030 goal, and the CEC to establish annual targets for energy efficiency savings and demand reductions for local publicly-owned electric utilities consistent with the 2030 goal. Each retailer of electricity must regularly file an integrated resource plan (IRP) for review and approval.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's RPS Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

### ***Other Energy Related Statutes and Executive Orders***

Additional State legislation and executive orders focused on energy efficiency and renewable energy are highlighted briefly below:

- Senate Bill 107: This legislation, which addresses California's Renewables Portfolio Standard (RPS), requires retail sellers of electricity to procure 20 percent of retail sales from renewable energy by 2010.
- Assembly Bill 1613: This legislation, also known as the Waste Heat and Carbon Emissions Reduction Act, was designed to encourage the development of new combined heat and power systems in California with a generating capacity of up to 20 megawatts (MW).
- Senate Bill 1: This legislation enacted the Governor's Million Solar Roofs program and has an overall objective of installing 3,000 MW of solar photovoltaic systems.
- Senate Bill 1389: This legislation requires the California Energy Commission to prepare a biennial integrated energy policy report that contains an assessment of major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety.
- Executive Order S-06-06: This order directs State agencies to work together to advance biomass energy programs in California while providing environmental protection and mitigation and established the following targets for the use and production of biofuels and biopower: produce a minimum of 40 percent of its biofuels in California by 2020 and 75 percent by 2050.

- Executive Order B-18-12: This order directs state agencies to reduce their grid-based energy purchases by at least 20 percent by 2018, as compared to a 2003 baseline.
- Executive Order B-48-18: This order will boost the use of zero-emission vehicles (ZEVs), electric vehicle charging infrastructure, and hydrogen refueling infrastructure in California in order to implement Governor Brown’s target of 5 million ZEVs on the road by 2030 and 250,000 vehicle charging stations and 200 hydrogen refueling stations by 2015.

### 3.5.2.3 Local

The following goals and policies of the *City of Moorpark General Plan* are applicable to the proposed Hitch Ranch Specific Plan project.

#### *Land Use Element*

**Goal 12:** Ensure that a full range of public facilities and services are provided to meet the needs of the community.

**Policy 12.1:** Development shall be permitted only when adequate public facilities and services are available or will be provided when needed.

**Policy 12.2:** Efficient and equitable delivery of urban services shall be ensured by the development of capital improvement plans for urban services which 1) identify existing and future (general plan buildout) needs; 2) establish a phasing plan for providing new urban services that commensurate with needs generated by existing and future development; and 3) assure that financing is available to provide adequate necessary facilities and services prior to approval of any project which would exceed the capacity or significantly reduce the quality of existing services.

**Policy 12.7:** Where feasible, shared use programs between public and private service and facility providers shall be encouraged.

**Policy 12.8:** Any proposed project shall be required to contribute its fair share of the cost of providing adequate public services and facilities.

**Goal 15:** Maintain a high-quality environment that contributes to and enhances the quality of life and protects public health, safety and welfare.



**Policy 17.8:** Undergrounding of utilities shall be required in conjunction with development projects whenever feasible.

### 3.5.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the *State CEQA Guidelines* (Environmental Checklist Form), a project could have a significant impact when it would:

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

### 3.5.4 METHODOLOGY

The analysis in this section focuses on the nature and magnitude of the change in energy resources due to construction and operation of the Proposed Project. To address the significance thresholds, the focus of this analysis is related to energy efficiency within the context of existing regulatory environment. The methodology used to estimate the construction phase energy use is described in **Impact EN-1** below.

With respect to energy consumption during occupancy/operation, the increased electricity and natural gas demand due to operation/occupancy of the Proposed Project were estimated using the CalEEMod emissions model (refer to **Appendix 3.2-A**). In addition, as the Proposed Project would result in daily vehicle trips to and from the Project site, due to typical residential commutes, the increase in the consumption of petroleum-based fuel was calculated for the Proposed Project based on vehicle miles traveled (VMT) associated with the Proposed Project and estimated in the traffic analysis.

### 3.5.4 PROJECT IMPACTS

**Impact ENR-1**            **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

*Less than Significant with Mitigation*

#### **Construction**

Project construction would require grading, building construction, and paving in five project phases. All construction would be typical for the region and the nature of construction activity. During construction of the Proposed Project, energy would be consumed in the form of petroleum-based fuels used to power

off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site as well as delivery truck trips; and to operate generators to provide temporary power for lighting and electronic equipment. The manufacturing of construction materials used by the Proposed Project would also involve energy use. Due to the large number of materials and manufacturers involved in the production of construction materials (including manufacturers in other states and countries), upstream energy use cannot be reasonably estimated. However, it is reasonable to assume that manufacturers of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. Furthermore, neither the City nor the Applicant has control over or the ability to influence energy resource use by the manufacturers of construction materials. Therefore, this analysis does not evaluate upstream energy use.

### *Petroleum-based Fuel*

The average monthly and total consumption of gasoline and diesel fuel during project construction was estimated using the same assumptions and factors from CalEEMod that were used in estimating construction air emissions, see **Section 4.2 Air Quality**, and **Appendix 3.2-A**. As shown in **Table 3.5-1, Off-Road Construction Equipment Diesel Fuel Consumption** and **Table 3.5-2, Construction Trip Fuel Consumption**, a total of approximately 281,916 gallons of diesel fuel, and 91,093 gallons of gasoline would be consumed over the project's construction horizon of approximately 5-years, or approximately 4,699 gallons of diesel fuel, and 1,518 gallons of gasoline per month.

**Table 3.5-1  
Off-Road Construction Diesel Fuel Consumption**

Phase	Equipment Type	Units	Hours	Horse Power	Load Factor	Number of Days	Fuel Usage/HP/hr	Diesel Usage (in gallons)
Grading	Excavators	2	8	158	0.38	218	0.05	10,471
	Graders	1	8	187	0.41	218	0.05	6,686
	Rubber Tired Dozers	1	8	247	0.40	218	0.05	8,615
	Scrapers	2	8	367	0.48	218	0.05	30,722
	Tractors/Loaders/Backhoes	2	8	97	0.37	218	0.05	6,259
Paving	Pavers	2	8	130	0.42	72	0.05	3,145
	Paving Equipment	2	8	132	0.36	72	0.05	2,737
	Rollers	2	8	80	0.38	72	0.05	1,751
Grading P2	Excavators	2	8	158	0.38	5	0.05	240
	Graders	1	8	187	0.41	5	0.05	153
	Rubber Tired Dozers	1	8	247	0.40	5	0.05	198
	Scrapers	2	8	367	0.48	5	0.05	705

## 3.5 Energy

Phase	Equipment Type	Units	Hours	Horse Power	Load Factor	Number of Days	Fuel Usage/HP/hr	Diesel Usage (in gallons)
	Tractors/Loaders/Backhoes	2	8	97	0.37	5	0.05	144
Building Construction P2	Cranes	1	7	231	0.29	367	0.05	8,605
	Forklifts	3	8	89	0.20	367	0.05	7,839
	Generator Sets	1	8	84	0.74	367	0.05	9,125
	Tractors/Loaders/Backhoes	3	7	97	0.37	367	0.05	13,830
	Welders	1	8	46	0.45	367	0.05	3,039
Architectural Coating P2	Air Compressors	1	6	78	0.48	20	0.05	225
Grading P3	Excavators	2	8	158	0.38	86	0.05	4,131
	Graders	1	8	187	0.41	86	0.05	2,637
	Rubber Tired Dozers	1	8	247	0.40	86	0.05	3,399
	Scrapers	2	8	367	0.48	86	0.05	12,120
	Tractors/Loaders/Backhoes	2	8	97	0.37	86	0.05	2,469
Utilities P3	Cranes	1	7	231	0.29	88	0.05	2,063
	Forklifts	3	8	89	0.20	88	0.05	1,880
	Generator Sets	1	8	84	0.74	88	0.05	2,188
	Tractors/Loaders/Backhoes	3	7	97	0.37	88	0.05	3,316
	Welders	1	8	46	0.45	88	0.05	729
Paving P3	Pavers	2	8	130	0.42	87	0.05	3,800
	Paving Equipment	2	8	132	0.36	87	0.05	3,307
	Rollers	2	8	80	0.38	87	0.05	2,116
Grading P4	Excavators	2	8	158	0.38	6	0.05	288
	Graders	1	8	187	0.41	6	0.05	184
	Rubber Tired Dozers	1	8	247	0.40	6	0.05	237
	Scrapers	2	8	367	0.48	6	0.05	846
	Tractors/Loaders/Backhoes	2	8	97	0.37	6	0.05	172
Building Construction 4	Cranes	1	7	231	0.29	234	0.05	5,486
	Forklifts	3	8	89	0.20	234	0.05	4,998
	Generator Sets	1	8	84	0.74	234	0.05	5,818
	Tractors/Loaders/Backhoes	3	7	97	0.37	234	0.05	8,818
	Welders	1	8	46	0.45	234	0.05	1,938
Architectural Coating P4	Air Compressors	1	6	78	0.48	20	0.05	225
Grading P5	Excavators	2	8	158	0.38	6	0.05	288
	Graders	1	8	187	0.41	6	0.05	184
	Rubber Tired Dozers	1	8	247	0.40	6	0.05	237
	Scrapers	2	8	367	0.48	6	0.05	846
	Tractors/Loaders/Backhoes	2	8	97	0.37	6	0.05	172
Building Construction 5	Cranes	1	7	231	0.29	234	0.05	5,486
	Forklifts	3	8	89	0.20	234	0.05	4,998

Phase	Equipment Type	Units	Hours	Horse Power	Load Factor	Number of Days	Fuel Usage/HP/hr	Diesel Usage (in gallons)
	Generator Sets	1	8	84	0.74	234	0.05	5,818
	Tractors/Loaders/Backhoes	3	7	97	0.37	234	0.05	8,818
	Welders	1	8	46	0.45	234	0.05	1,938
Architectural Coating P5	Air Compressors	1	6	78	0.48	21	0.05	236
Grading P6	Excavators	2	8	158	0.38	4	0.05	192
	Graders	1	8	187	0.41	4	0.05	123
	Rubber Tired Dozers	1	8	247	0.40	4	0.05	158
	Scrapers	2	8	367	0.48	4	0.05	564
	Tractors/Loaders/Backhoes	2	8	97	0.37	4	0.05	115
Building Construction P6	Cranes	1	7	231	0.29	115	0.05	2,696
	Forklifts	3	8	89	0.20	115	0.05	2,456
	Generator Sets	1	8	84	0.74	115	0.05	2,859
	Tractors/Loaders/Backhoes	3	7	97	0.37	115	0.05	4,334
	Welders	1	8	46	0.45	115	0.05	952
Architectural Coating P6	Air Compressors	1	6	78	0.48	11	0.05	124
<b>Total Diesel Consumption</b>								<b>231,248</b>

Source: CalEEMod Model Data, Rincon Consultants, Inc. December 2021. Appendix 3.2-A.

**Table 3.5-2  
Construction Trip Fuel Consumption**

Phase	Number of Trips	Number of Days	Average Commute Distance (in miles)	Fuel Usage (mpg) <sup>a, b</sup>	Gasoline/Diesel Usage (in gallons)
<b>Worker Trips (Gasoline)</b>					
Grading	20	218	10.8	22.3	2,112
Paving	15	72	10.8	22.3	523
Grading P2	20	5	10.8	22.3	48
Building Construction P2	170	367	10.8	22.3	30,216
Architectural Coating P2	34	20	10.8	22.3	329
Grading P3	20	86	10.8	22.3	833
Paving P3	15	88	10.8	22.3	639
Utilities P3	514	87	10.8	22.3	21,657
Grading P4	20	6	10.8	22.3	58
Building Construction P4	136	234	10.8	22.3	15,413
Architectural Coating P4	27	20	10.8	22.3	262
Grading P5	20	6	10.8	22.3	58

Building Construction P5	136	234	10.8	22.3	15,413
Architectural Coating P5	27	21	10.8	22.3	275
Grading P6	20	4	10.8	22.3	39
Building Construction P6	71	115	10.8	22.3	3,954
Architectural Coating	14	11	10.8	22.3	75
<b>Total Gasoline Usage</b>					<b>91,093</b>
<b>Vendor Trips (Diesel)</b>					
Building Construction P2	43	367	7.3	6.5	17,723
Utilities P3	129	88	7.3	6.5	12,749
Building Construction P4	34	234	7.3	6.5	8,935
Building Construction P5	34	234	7.3	6.5	8,935
Building Construction P6	18	115	7.3	6.5	2,325
<b>Total Diesel Usage</b>					<b>50,668</b>

Source: CalEEMod Model Data, Rincon Consultants, Inc., December 2021. Appendix 3.2-A.

<sup>a</sup> Bureau of Transportation Statistics. Average Fuel Efficiency of U.S. Light Duty Vehicles. Available at: <https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles>, accessed October 1, 2019.

<sup>b</sup> Rentar Fuel Catalyst. Here Are the Diesel Truck Miles Per Gallon (MPG). Available online at: <https://rentar.com/diesel-truck-miles-per-gallon-mpg/>, accessed October 1, 2019.

Notes: Average worker trip fuel usage from the year 2016, since construction is from 2021 to 2026, these emission estimates are conservative.

The estimated quantity of gasoline and diesel fuel would be approximately 4,699 gallons of diesel fuel, and 1,518 gallons of gasoline per month, over the 60 months of construction modeled within CalEEMod. Project construction would comply with the VCAPCD's *Air Quality Assessment Guidelines* to minimize fugitive dust, ROG, and NO<sub>x</sub> emissions including limiting traffic speed on site and vehicle idling time, refer to **Section 3.2, Air Quality, VCAPCD Construction Control Measures CM AQ-1 and AQ-2, and Construction Mitigation Measure MM AQ-2**. This would in turn reduce construction energy consumption.

In addition, the Proposed Project would utilize sustainable materials and recycled content that would reduce construction-related energy consumption associated with materials production. Construction materials would include recycled materials and products originating from nearby sources to the extent feasible in order to comply with CALGreen and to reduce costs and fuel use related to transportation of materials.

Further, all grading (cut and fill) would be balanced on-site, eliminating the need for any haul trucks to remove or supply soil to the Project site. The project also would not require any demolition as the site is currently undeveloped. The project would also use, at a minimum, U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent, refer to **Section 3.2, Air Quality, Construction Mitigation Measure MM AQ-2**. Idling restrictions and the use of newer engines and properly maintained equipment would result in less fuel combustion and energy consumption. Therefore, petroleum-based fuel use

during construction is not considered to be wasteful, inefficient, or unnecessary. Furthermore, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of fuel use during construction.

### *Electricity*

Electrical energy would be consumed on a temporary basis during construction of the Specific Plan. The energy would serve construction trailers, power tools, tool sheds, work and storage areas, and other facilities associated with construction activity. Construction activity is not expected to consume significant amounts of energy due to the temporary nature of these activities. Therefore, electrical use during construction is not considered to be wasteful, inefficient, or unnecessary.

### *Natural Gas*

Due to the nature of construction activities, natural gas use would not be required. Some natural gas may be consumed during the installation and upgrade of natural gas distribution lines at the site. However, the amount of natural gas consumed during this process would be negligible. Therefore, electrical use during construction is not considered to be wasteful, inefficient, or unnecessary. As such, the Proposed Project's construction energy consumption would not be inefficient, wasteful, and unnecessary, and the impact would be less than significant with mitigation.

## **Operation**

### *Petroleum-based Fuel*

The Proposed Project would result in the consumption of petroleum-fuel related to vehicular travel (quantified as vehicle miles traveled (VMT)) to and from the Project site. **Table 3.5-3, Estimated Petroleum-based Fuel Usage at Buildout**, below, presents the projected Project consumption of approximately 71,151 gallons of diesel and 464,710 gallons of gasoline per year, or a total of 535,860 gallons of petroleum-based fuels per year based on an annual estimate of 33,585 daily VMT, **see Section 3.15 Transportation**.

**Table 3.5-3  
Estimated Petroleum-based Fuel Usage at Project Buildout**

Source	Fleet Mix <sup>a</sup>	Generation Factor <sup>b</sup>	Annual Consumption (in gallons)
Mobile			
Diesel (gallons)	16.6%	33,585/28.6 mpg	71,151
Gasoline (gallons)	83.4%	33,585/22 mpg	464,710
		<b>Total</b>	<b>535,860</b>

Source: Rincon Consulting, Inc., August 2021.

Notes:

mpg = miles per gallon

a Data Source: FHWA OHPI, Highway Statistics, Fuel Consumption by State and Type

<http://www.fhwa.dot.gov/policyinformation/pubs/hf/pl11028/chapter5.cfm>

b Bureau of Transportation Statistics. Average Fuel Efficiency of U.S. Light Duty Vehicles. Available at: <https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles>, accessed October 1, 2019c Diesel-powered vehicles typically get 30-35% more miles per gallon than comparable vehicles powered by gasoline. US Department of Energy, Fuel Economy Guide, <http://www.fueleconomy.gov/feg/pdfs/guides/FEG2013.pdf>.

As shown in **Table 3.5-3**, project operation would result in a demand of 71,151 gallons of diesel and 464,710 gallons of gasoline per year. This is a conservative estimate, given that it assumes no electric, hybrid, or other alternative fuel use vehicles in the fleet mix. Furthermore, this level of annual consumption is based on 2016 fuel efficiency rates (miles per gallon). Federal and state laws and regulations will continue to require further improvements in fuel efficiency in motor vehicles produced and/or sold in the US and the total annual consumption of petroleum-based fuel is expected to decrease over time. Furthermore, as the residents replace their older model cars, more efficient cars will take their place, further reducing the total petroleum-based fuel consumption in the future years of project operations. As a result, **Table 3.5-3** represents a high-end estimate of fuel use. Therefore, petroleum-based fuel use during operation is not considered to be wasteful, inefficient, or unnecessary.

### ***Electricity and Natural Gas***

According to the CalEEMod estimates, once fully operational, the project would result in a demand of approximately 14,106 million British Thermal Units per year (mBTU/year) of natural gas and up to 4,631,905 kilowatt hours per year (kWh/year), or 4.6 gigawatt hours per year (GWh/year), of electricity.

The project would be required to comply with the 2019 California Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) under Title 24. The 2019 iteration of Title 24 went into effect January 1, 2020 and represents the state policy on building energy efficiency. The goals of the Title 24 standards are to improve energy efficiency of residential and non-residential buildings,

minimize impacts during peak energy-usage periods, and reduce impacts on state energy needs. In accordance with Section 150.1(b)14 of the 2019 Building Energy Efficiency Standards, all new residential uses of three stories or less would install solar photovoltaic (PV) panels that generate an amount of electricity equal to their expected electricity usage. In addition, although not required by Title 24, the project would include a rooftop solar system sized at approximately 112 kilowatts for the proposed four-story building that would accommodate the electricity needs of the approximately 135 affordable apartment units. As a result, the majority of the project's electricity usage would be supplied by on-site solar PV panels. Therefore, the proposed project would include sustainability measures to minimize nonrenewable energy use and electricity use. Moreover, **Mitigation Measure E-2** will require the Applicant to affirm provisions of natural gas and electricity to the Proposed Project from SoCal Gas and SCE. As such, the proposed project's operational energy consumption would not be inefficient, wasteful, and unnecessary, and the impact would be less than significant with mitigation.

**Impact ENR-2**                    **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.**

*Less than Significant*

## **Renewable Energy**

Electricity for the Proposed Project would be provided by SCE. As a publicly owned utility, SCE is required to comply with Senate Bills 350 and 100, which require utility companies to provide 33 percent renewable energy by the end of 2020, 60 percent renewable energy by 2030, and 100 percent by 2045. The Proposed Project would further reduce its use of nonrenewable energy resources as the electricity generated by renewable resources provided by SCE continues to increase to comply with State requirements through SB 100. Since the project would become operational in 2026, it can be assumed that over a third of the electricity provided by SCE to the Project site would be from renewable sources. Moreover, the project would supply the majority of on-site electrical demand through the use of solar PV systems in accordance with the requirement of Section 150.1(b)14 of the 2019 Building Energy Efficiency Standards to install solar PV panels that generate an amount of electricity equal to their expected electricity usage on all new residential uses three stories or less and the proposed rooftop solar system sized at approximately 112 kilowatts for the proposed four-story building.

Because the Proposed Project would be powered by a combination of project-specific solar photovoltaic-generated electricity and the State electricity grid, it would be powered by renewable energy as mandated by Senate Bills 350 and 100.



## Energy Efficiency

As stated above, the Proposed Project would comply with all building design standards set in CBC Title 24. CALGreen Code (CBC Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction project, and the State Building Energy Efficiency Standards (CBC Title 24, Part 6) require newly constructed buildings to meet energy performance standards set by the CEC. These standards are specifically crafted for new buildings to result in energy efficient performance, so that the buildings do not result in inefficient consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. The Proposed Project buildings would comply with the latest energy efficiency standards pursuant to CALGreen Code and State Building Energy Efficiency Standards.

Federal and State California Corporate Average Fuel Economy (CAFÉ) standards were first created in 1975 in order to reduce energy consumption by increasing the fuel economy of cars and light trucks by creating fleet-wide averages. All vehicles within the state are subject to this regulation. Therefore, vehicles related to both the construction and operation of the Proposed Project would be in compliance with the CAFÉ standards.

Therefore, the Proposed Project would not conflict with applicable plans related to renewable energy or energy efficiency, and this impact would be less than significant.

### 3.5.5 CUMULATIVE IMPACTS

All cumulative projects, including the Proposed Project, would be required to comply with CBC Title 24 minimum 2019 Building Energy Efficiency standards (CBC Title 24, Part 6) and CALGreen Code requirements (CBC Title 24, Part 11). Cumulative buildings would be designed in accordance with these minimum State energy efficiency standards for residential and nonresidential buildings. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting. The incorporation of CBC Title 24 standards into the design of the cumulative projects, including the Proposed Project, would not result in wasteful, inefficient, or unnecessary use of energy. As determined, with implementation of Mitigation Measure VCAPCD Construction Control Measures **CM AQ-1** and **CM AQ-2**, Construction Mitigation Measure **MM AQ-2**, the Proposed Project would not contribute to a significant environmental impact related to the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the Proposed Project, in conjunction with other existing, planned, and foreseeable future projects, would be cumulatively less than significant with mitigation incorporated related to energy use and be consistent with applicable increased energy efficiency and increased renewable energy use plans.

### 3.5.6 MITIGATION PROGRAM

#### 3.5.6.1 Standard Conditions and Regulatory Requirements

- Prior to issuance of each building permit, the Project Applicant shall submit plans to the City Building Official demonstrating that each of the project's buildings will comply with the State Energy Conservation Standards for New Residential and Nonresidential Buildings (Title 24, Part 6, Article 2, *California Administrative Code*). *City of Moorpark*
- Prior to recordation of final maps, the Project Applicant shall provide to the City of Moorpark Public Works Department, "will-serve" letters from Southern California Gas Company and Southern California Edison, which affirm provision of natural gas and electricity to the Proposed Project. *City of Moorpark*

#### 3.5.6.2 Mitigation Measures

Impacts related to the wasteful, inefficient, or unnecessary consumption of Petroleum-Based Fuel during construction would be mitigated with the implementation of **VCAPCD Construction Control Measures CM AQ-1** and **CM AQ-2**, and **Construction Mitigation Measure MM AQ-2**.

#### 3.5.7 Level of Significance After Mitigation

Project specific and cumulative residual impacts would be less than significant.