IV. Environmental Impact Analysis
M. Energy Conservation and Infrastructure

1. Introduction

This section of the Draft EIR provides the content and analysis required by Public Resources Code, Section 21100(b)(3) and described in Appendix F to the Guidelines for the Implementation of the California Environmental Quality Act (14 California Code of Regulations Sections 15000 et seq.). This section analyzes the Project's potential impacts on energy resources, focusing on the following three energy resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). This section evaluates the demand for energy resources attributable to the Project during construction and operation and makes a determination regarding whether the Project's use of energy resources would be wasteful or inefficient. This section also demonstrates whether the current and planned electrical, natural gas, and petroleum-based fuel supplies and distribution systems are adequate to meet the Project's forecasted energy consumption. The information presented herein is based, in part, on the *Energy Calculations for Paseo Marina Project* provided in Appendix P of this Draft EIR and "will serve" letters provided by the Los Angeles Department of Water and Power (LADWP), for electricity, and Southern California Gas Company (SoCalGas), for natural gas, provided in Appendix P of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

(1) Federal

(a) Federal Corporate Average Fuel Economy (CAFE) Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic

practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.[1]

(b) Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[2]

(2) State

(a) California Building Standards Code (Title 24)

(i) California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to

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[1] *For more information on the CAFE standards, refer to www.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy, accessed February 13, 2019.*

[2] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2016 Title 24 standards, which became effective on January 1, 2017.[3] The 2016 Title 24 standards include efficiency improvements to the residential standards for attics, walls, water heating, and lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers *(*ASHRAE) 90.1 2013 national standards.[4]

(ii) California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, most recently went into effect on January 1, 2017.[5] The 2016 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.[6] Mandatory measures include, but are not limited to, installation of water conserving plumbing fixtures and fittings and provision of EV charging spaces. Most mandatory measure changes, when compared to previously applicable 2013 CALGreen Code, were related to the definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicles chargers and charging and hot water recirculation systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification.[7] For nonresidential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been revised in its entirety.[8]

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[3] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed February 13, 2019.*

[4] *CEC, 2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, June 2015.*

[5] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed February 13, 2019.*

[6] *California Building Standards Commission, Guide to the 2016 California Green Building Standards Code Nonresidential, January 2017.*

[7] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2017.*

[8] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5—Nonresidential Mandatory Measures, effective January 1, 2017.*

(b) California's Renewable Portfolio Standard

First established in 2002 under Senate Bill 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.[9] The California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.[10] The CEC's responsibilities include: (1) certifying renewable facilities as eligible for the RPS; and (2) designing and implementing a tracking and verification system to ensure that renewable energy output is counted only once for the purpose of the RPS and verifying retail product claims in California or other states.

(c) Senate Bill 350

Senate Bill (SB) 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15, issued in April 2015, which established a new statewide policy goal to reduce greenhouse gas (GHG) emissions 40 percent below their 1990 levels by 2030. The objectives of SB 350 are: (1) to increase the procurement of our electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation by 2030.[11]

(d) Senate Bill 100

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's RPS and SB 350, as discussed above, to the following: achieve 50 percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales

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[9] *CPUC, California Renewables Portfolio Standard (RPS), www.cpuc.ca.gov/RPS_Homepage/, accessed February 13, 2019.*

[10] *CPUC, California Renewables Portfolio Standard (RPS), www.cpuc.ca.gov/RPS_Homepage/, accessed February 13, 2019.*

[11] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.*

of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[12]

(e) Assembly Bill 32

As discussed in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR, Assembly Bill (AB) 32 (Health and Safety Code Sections 38500–38599), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 GHG levels by 2020. To achieve these goals, AB 32 tasked the CPUC and the CEC with providing information, analysis, and recommendations to the California Air Resources Board (CARB) regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

(f) Assembly Bill 1493 (AB 1493)/Pavley Regulations

AB 1493 (commonly referred to as CARB's Pavley regulations) was the first legislation to regulate GHG emissions from new passenger vehicles. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks) for model years 2009–2016. The Pavley regulations are expected to reduce GHG emissions from California's passenger vehicles by about 30 percent in 2016, while improving fuel efficiency and reducing motorists' costs.

(g) Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10-percent total reduction in 2020.[13] Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.[14]

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[12] *Senate Bill 100 (2017-2018 Reg. Session_ Stats 2018, ch. 312.*

[13] *Executive Order S-01-07, January 18, 2007.*

[14] *Executive Order S-01-07, January 18, 2007.*

(h) California Air Resources Board

(i) CARB's Advanced Clean Cars Regulation

Closely associated with the Pavley regulations, the Advanced Clean Car Standards emissions-control program was approved by CARB in 2012. [15] The program combines the control of smog, soot causing pollutants, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025.[16] The components of the Advance Clean Car Standards include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[17] In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California through 2025. [18]

(ii) Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuels used by the vehicle.

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[15] *CARB, California's Advanced Clean Cars Program, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program, accessed February 13, 2019.*

[16] *CARB, California's Advanced Clean Cars Program, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program, accessed February 13, 2019.*

[17] *CARB, California's Advanced Clean Cars Program, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program, accessed February 13, 2019.*

[18] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed February 13, 2019.*

(iii) Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NO_X) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emission-controlled models. The newer emission-controlled models would use petroleum-based fuel in a more efficient manner.

(i) Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32. SB 375 specifically requires each Metropolitan Planning Organization (MPO) to prepare a "sustainable communities strategy" (SCS) as part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. [19]

The Project Site is located within the planning jurisdiction of the Southern California Association of Governments (SCAG). SCAG's first-ever SCS is included in the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS), which was adopted by SCAG in April 2012. The goals and policies of the SCS that reduce VMT (and result in corresponding decreases in transportation-related fuel consumption) focus on transportation and land use planning that include building infill projects, locating residents closer to where they work and play, and designing communities so there is access to high quality transit service. Recently, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS).[20] The goals and policies of the 2016–2040 RTP/SCS are the same as those in the 2012–2035 RTP/SCS. See further discussion below.

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[19] *CARB, Sustainable Communities, ww2.arb.ca.gov/our-work/topics/sustainable-communities, accessed February 13, 2019.*

[20] *SCAG, 2016–2040 RTP/SCS, dated April 2016.*

(j) Assembly Bill 758

AB 758 requires the CEC to develop a comprehensive program to achieve greater energy efficiency in the state's existing buildings. As part of the requirements of AB 758, the AB 758 Action Plan was released March 2015 and provides a 10-year roadmap that would result in accelerated growth of energy efficiency markets, more effective targeting and delivery of building upgrade services, improved quality of occupant and investor decisions, and vastly improved performance of California's buildings in service of those who own and occupy them. The AB 758 Action Plan provides a comprehensive framework centered on five goals, each with an objective and a series of strategies to achieve it.

(k) Senate Bill 1389

Senate Bill 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the development of an integrated plan for electricity, natural gas, and transportation fuels. The CEC must adopt and transmit to the Governor and Legislature an Integrated Energy Policy Report every two years. The most recently completed report, the 2018 Integrated Energy Policy Report, contains two volumes. The Volume I, which was adopted August 1, 2018, highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, which is scheduled for completion in February 2019, will provide more detail on several key energy issues and will encompass new analyses.[21]

(l) California Environmental Quality Act

In accordance with the California Environmental Quality Act (CEQA) and Appendix F, Energy Conservation, of the CEQA Guidelines, in order to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code Section 21100(b)(3)). Appendix F of the CEQA Guidelines provides a list of energy-related items that may be included throughout the various chapters of an EIR. In addition, while not described as thresholds for determining the significance of impacts related to energy, Appendix F provides the following items that the lead agency may consider in the discussion of energy use in an EIR, where topics are applicable or relevant to the project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction,

[21] *CEC, 2018 Integrated Energy Policy Report, adopted August 1, 2018.*

operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;

- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; or
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

(3) Regional

As discussed in Section IV.G, Land Use, of this Draft EIR, SCAG's 2016–2040 RTP/SCS presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. On April 7, 2016, the SCAG Regional Council adopted the 2016–2040 RTP/SCS, the mission of which is "leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians." The 2016–2040 RTP/SCS includes land use strategies that focus on urban infill growth and walkable, mixed-use communities in existing urbanized and opportunity areas. More mixed-use, walkable, and urban infill development would be expected to accommodate a higher proportion of growth in more energy-efficient housing types like townhomes, apartments, and smaller single-family homes, as well as more compact commercial buildings types. Furthermore, the 2016–2040 RTP/SCS includes transportation investments and land use strategies that encourage carpooling, increased transit use, active transportation opportunities, and promoting more walkable and mixed use communities which would potentially help to offset passenger vehicle miles travelled (VMT).

The 2016–2040 RTP/SCS also establishes High-Quality Transit Areas (HQTA), which are generally described as walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor that has a minimum density of 20 dwelling units per acre with a 15-minute or less service frequency during peak commute hours. Local jurisdictions are encouraged to focus housing and employment growth within HQTAs to reduce VMT. The Project Site is located within a HQTA as designated by the 2016–2040 RTP/SCS.

(4) Local

(a) City of Los Angeles Green Building Code

On December 20, 2016, the Los Angeles City Council approved Ordinance No. 184,692, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the "Los Angeles Green Building Code," by amending certain provisions of Article 9 to reflect local administrative changes and incorporating by reference portions of the 2016 CALGreen Code. Specific mandatory requirements to reduce energy are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Mandatory measures include, but are not limited to, installation of water conserving plumbing fixtures and fittings and provision of EV charging spaces. Article 9, Division 5 includes measures for newly constructed nonresidential and high-rise residential buildings.

(b) City of Los Angeles Green LA Action Plan/ClimateLA

Green LA, An Action Plan to Lead the Nation in Fighting Global Warming (LA Green Plan) is the City of Los Angeles's climate action plan. The LA Green Plan, released in May 2007, sets forth a goal of reducing the City's GHG emissions to 35 percent below 1990 levels by the year 2030. Climate LA is the implementation program that provides detailed information about each action item discussed in the Green LA framework. Climate LA includes focus areas addressing environmental issues including but not limited to energy, water, transportation, and waste. The energy focus area includes action items with measures that aim to increase the use of renewable energy to 35 percent by 2020, reduce the use of coal-fired power plants, and present a comprehensive set of green building policies to guide and support private sector development.

(c) City of Los Angeles Solid Waste Programs and Ordinances

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced. For example, in 2015, 3.61 million tons of aluminum were produced by recycling in the United States, saving enough energy to provide electricity to 7.5 million homes.[22] The City of Los Angeles includes programs and ordinances related to solid waste. They include: (1) the City of Los Angeles Solid Waste Management Policy Plan, which was adopted in 1993 and is a long-range policy plan promoting source

[22] *American Geosciences Institute, How Does Recycling Save Energy?, www.americangeosciences.org/critical-issues/faq/how-does-recycling-save-energy, accessed February 13, 2019.*

reduction for recycling for a minimum of 50 percent of the City's waste by 2000 and 70 percent of the waste by 2020; (2) the RENEW LA Plan, which is a Resource Management Blueprint with the aim to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources now going to disposal so as to achieve an overall diversion level of 90 percent or more by 2025; (3) the Waste Hauler Permit Program (Ordinance 181,519), which requires all private waste haulers collecting solid waste, including construction and demolition waste, to obtain AB 939 Compliance Permits and to transport construction and demolition waste to City certified construction and demolition processing facilities; and (4) the Exclusive Franchise System Ordinance (Ordinance No. 182,986), which, among other requirements, sets maximum annual disposal levels and specific diversion requirements for franchised waste haulers in the City to promote solid waste diversion from landfills in an effort to meet the City's zero waste goals. These solid waste reduction programs and ordinances not only help to reduce the number of trips to haul solid waste, therefore reducing the amount of petroleum-based fuel, they also help to reduce the energy used to process solid waste.

b. Existing Conditions

(1) Electricity

Electricity, a consumptive utility, is a manufactured resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity, or electrical power, is generally measured in watts (W) while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

The Los Angeles Department of Water and Power (LADWP) provides electrical service throughout the City of Los Angeles and many areas of the Owens Valley, serving approximately four million people within a service area of approximately 465 square miles, excluding the Owens Valley. Electrical service provided by the LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District includes the

LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The Project Site is located within LADWP's Metropolitan Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resources Plan, the LADWP has a net dependable generation capacity greater than 7,531 MW.[23] In 2017, the LADWP power system experienced an instantaneous peak demand of 6,432 MW.[24] Approximately 30 percent of LADWP's 2017 electricity purchases were from renewable sources, which is greater than the 29 percent statewide percentage of electricity purchases from renewable sources.[25]

LADWP supplies electrical power to the Project Site from existing electrical service lines located underground in the vicinity of the Project Site. It is estimated that existing uses on the Project Site currently consume approximately 1,770,746 kWh of electricity per year.[26]

(2) Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel. Natural gas is measured in terms of cubic feet (cf).

Natural gas is provided to the Project Site by the Southern California Gas Company (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.6 million customers in more than 500 communities encompassing approximately

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[23] *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017.*

[24] *LADWP, 2017 Retail Electric Sales and Demand Forecast, p. 6.*

[25] *California Energy Commission, Utility Annual Power Content Labels for 2017, www.energy.ca.gov/pcl/labels/, accessed February 13, 2019.*

[26] *Eyestone Environmental, Energy Calculations for Paseo Marina Project, See Appendix P of this Draft EIR.*

20,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.[27]

SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada as well as local California supplies.[28] Traditional, southwestern United States sources of natural gas will continue to supply most of SoCalGas's natural gas demand. The Rocky Mountain is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.[29] Gas supply available to SoCalGas from California sources averaged 323 million cf per day in 2017 (the most recent year for which data are available).[30]

SoCalGas supplies natural gas to the Project Site from the existing medium pressure main in Glencoe Avenue. It is estimated that existing uses on the Project Site currently consume approximately 174,686 cubic feet of natural gas per year.[31]

(3) Transportation Energy

According to the CEC, transportation accounts for nearly 37 percent of California's total energy consumption in 2014.[32] In 2016, California consumed 15.5 billion gallons of gasoline and 3.0 billion gallons of diesel fuel.[33] Petroleum-based fuels currently account for 90 percent of California's transportation energy sources.[34] However, the state is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce VMT. Accordingly, gasoline

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[27] *SoCalGas, Company Profile, www.socalgas.com/about-us/company-info.shtml, accessed February 13, 2019.*

[28] *California Gas and Electric Utilities, 2018 California Gas Report, p. 80.*

[29] *California Gas and Electric Utilities, 2018 California Gas Report, p. 80.*

[30] *California Gas and Electric Utilities, 2018 California Gas Report, p. 80.*

[31] *Eyestone Environmental, Energy Calculations for Paseo Marina Project, See Appendix P of this Draft EIR.*

[32] *CEC, 2016 Integrated Energy Policy Report, docketed January 18, 2017, p. 4.*

[33] *California Board of Equalization, Net Taxable Gasoline Gallons 10 Year Report, and Net Taxable Diesel Gallons 10 Year Report.*

[34] *California Energy Commission. 2016–2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program, March 2016.*

consumption in California has declined.[35] The CEC predicts that the demand for gasoline will continue to decline over the next ten years, and there will be an increase in the use of alternative fuels.[36] According to CARB's EMFAC Web Database, Los Angeles County on-road transportation sources consumed 3.99 billion gallons of gasoline and 0.68 billion gallons of diesel fuel in 2016.[37]

The existing on-site land uses currently generate a demand for transportation-related fuel use as a result of vehicle trips to and from the Project Site. The estimate of annual VMT associated with the existing Project Site uses is 4,047,044 VMT per year.[38] This translates to 159,476 gallons of gasoline and 4,884 gallons of diesel per year.[39] Persons traveling to and from the Project Site also have the option of using public transportation to reduce transportation-related fuel use. The Project is located in an area well-served by public transit provided by Los Angeles County Metropolitan Transit Authority (Metro), Los Angeles Department of Transportation (LADOT) Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus. Specifically, the Project Site is currently served by a total of 12 bus routes. For further discussion of public transit lines that serve the Project area, refer to Section IV.J, Traffic, Access, and Parking, of this Draft EIR.

3. Project Impacts

This analysis addresses the Project's potential energy usage, including electricity, natural gas, and transportation fuel. Energy consumption during both construction and operation is assessed. The Project's estimated energy consumption was calculated using California Emissions Estimator Model (CalEEMod) Version 2016.3.1. Specific analysis methodologies are discussed below.

a. Thresholds of Significance

Appendix F of the CEQA Guidelines was prepared in response to the requirement in Public Resources Code Section 21100(b)(3), which states that an EIR shall include a detailed statement setting forth "[m]itigation measures proposed to minimize significant

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[35] *State Board of Equalization, Economic Perspective, Discussion of Recent Economic Developments, Publication 329, Volume XIX, Number 1, February 2013.*

[36] *California Energy Commission, 2015 Integrated Energy Policy Report.*

[37] *California Air Resources Board, EMFAC2014 Web Database, www.arb.ca.gov/emfac/2014/, accessed February 13, 2019.*

[38] *The VMT provided reflects existing (2016) conditions, as calculated by CalEEMod.*

[39] *Eyestone Environmental, Energy Calculations for Paseo Marina Project, See Appendix P of this Draft EIR.*

effects of the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."

In addition, with regard to potential impacts to energy, the *L.A. CEQA Thresholds Guide* states that a determination of significance shall be made on a case-by case basis, considering the following factors:

- *The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity-enhancing alterations to existing facilities;*
- *Whether and when the needed infrastructure was anticipated by adopted plans; and*
- *The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.*

Significance Threshold No. 1: The Project would result in significant impacts with regard to energy use and consumption, if it would cause wasteful, inefficient, and unnecessary consumption of energy.

In accordance with Appendix G and the *L.A. CEQA Thresholds Guide*, the following criteria may be considered, where applicable, in determining whether this threshold of significance is met:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity;
3. The effects of the project on peak and base period demands for electricity and other forms of energy;
4. The degree to which the project complies with existing energy standards;
5. The effects of the project on energy resources;
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.
7. The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

8. Whether the Project conflicts with adopted energy conservation plans.

Significance Threshold No. 2: With regard to energy infrastructure, the Project would result in significant impacts if it would result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

b. Methodology

(1) Construction

During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control (including supply and conveyance) and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Electricity usage associated with the supply and conveyance of water used for fugitive dust control during construction (primarily related to the excavation period) was calculated using CalEEMod.[40] Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power was calculated based on data provided in South Coast Air Quality Management District (SCAQMD) construction surveys (i.e., construction activity, horsepower, load factor, and hours of use per day).[41]

In terms of natural gas, construction activities typically do not involve the consumption of natural gas.

Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Project Site, construction worker travel and from the project site, and delivery and haul truck trips (e.g., the hauling of demolition material to off-site reuse and disposal facilities). Fuel consumption from on-site heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files and included in Appendix P of this Draft EIR. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the South Coast Air Quality Management District's (SCAQMD) *CEQA Air Quality Handbook*. Fuel consumption from construction worker, vendor, and delivery/haul trucks was

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[40] *California Air Pollution Control Officers Association, CalEEMod™ version 2016.3.1, www.caleemod.com.*

[41] *CalEEMod Users Guide, Appendix E1, Technical Source Documentation, October 2017.*

calculated using the trip rates and distances provided in the CalEEMod construction output files. Total VMT was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using CARB's EMFAC 2014 model (EMFAC2014). EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline auto and 50 percent light duty gasoline trucks. Construction vendor and delivery/haul trucks were assumed to be heavy-duty diesel trucks. Refer to Appendix P of this Draft EIR for detailed calculations.

(2) Operation

Annual consumption of electricity (including electricity usage associated with the supply and conveyance of water) and natural gas usage associated with space heating and cooling, water heating, energy consumption, and lighting was calculated using demand factors provided in CalEEMod as part of the GHG analysis included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. CalEEMod Version 2016.3.1 provides default factors based on the 2013 Title 24 standards. The 2016 Title 24 standards, which went into effect on January 1, 2017, are 28 percent more efficient than the 2013 Title 24 standards for residential construction and 5 percent more efficient for non-residential construction.[42] Although CalEEMod Version 2016.3.1 does not to include these factors, these percentage reductions were applied to the relevant CalEEMod Version 2016.3.1 default energy intensity factors to estimate the energy demand for the Project.

Energy impacts associated with transportation during operation were also assessed. Daily trip generation used in this analysis was based on the *Transportation Impact Study: Paseo Marina Project* (Transportation Study) prepared by Linscott, Law, and Greenspan, Engineers, dated October 2017 and included in Appendix M of this Draft EIR. As discussed therein, the trip generation for the Project was determined based on the Institute of Transportation Engineers trip generation factors for the applicable land uses. The daily Project-related trips were then input into CalEEMod, which calculated the annual VMT. The resulting annual VMT was used as part of the GHG analysis included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR. Based on this annual VMT, gasoline and diesel consumption rates were calculated using the county-specific miles per gallon calculated using EMFAC2014. The vehicle fleet mix for vehicles anticipated to visit the Project Site was calculated consistent with the CalEEMod default for Los Angeles County. Supporting calculations are provided in Appendix P of this Draft EIR. These calculations were used to determine if the Project could potentially cause the wasteful, inefficient and/or

[42] *California Energy Commission, 2016 Building Energy Efficiency Standards Adoption Hearing presentation, June 10, 2015.*

unnecessary consumption of energy as required by Public Resources Code PRC 21100(b)(3).

The Project's estimated energy demands were also analyzed relative to LADWP's and SoCalGas' existing and planned energy supplies in 2023 (i.e., buildout of the Project) to determine if these two energy utility companies would be able to meet the Project's energy demands. Finally, the capacity of local infrastructure to accommodate the Project's estimated electricity and natural gas demand was assessed based on service letters included as part of Appendix P of this Draft EIR.

c. Project Design Features

The Project would include project design features designed to improve energy efficiency as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR.

d. Analysis of Project Impacts

(1) Energy Use

Significance Threshold No. 1: Would the Project cause wasteful, inefficient, and unnecessary use of energy?

The following analysis considers the eight criteria identified in the Thresholds of Significance subsection above to determine whether this significance threshold would be exceeded.

> *(a) The Project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed*

The Project would consume energy during construction and operational activities. Sources of energy for these activities would include electricity usage, natural gas consumption, and transportation fuels such as diesel and gasoline. The analysis below includes the Project's energy requirements and energy use efficiencies by fuel type for each stage of the Project (construction, operations, maintenance and removal activities).

For purposes of this analysis, Project maintenance would include activities such as repair of structures, landscaping and architectural coatings. Energy usage related to Project maintenance activities are assumed to be included as part of Project operations. Project removal activities would include demolition or abandonment of the site. However, it is not known when the Project would be removed. Therefore, analysis of energy usage

related to Project removal activities would be speculative. For this reason, energy usage related to Project removal was not analyzed.

(i) Construction

During construction of the Project, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. As discussed below, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support construction activities; thus there would be no demand of natural gas generated by construction of the Project. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Project Site, construction worker travel to and from the Project Site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

As shown in Table IV.M-1 on page IV.M-20, a total of 138,358 kWh of electricity, 112,142 gallons of gasoline, and 588,398 gallons of diesel is estimated to be consumed during construction of the Project. Project construction is expected to be completed by 2023.

Electricity

During construction of the Project, electricity would be consumed to supply and convey water for fugitive dust control and, on a limited basis, may be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. Electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical services within the Project Site and would not affect other services. The electricity demand during construction would be slightly offset with the removal of the existing uses and surface parking areas onsite which currently generate a demand for electricity. Some off-site construction activities to connect the Project's electrical infrastructure with primary electrical distribution lines could occur, and would include minor excavation.

As shown in Table IV.M-1, a total of approximately 138,358 kWh of electricity related to water consumption is anticipated to be consumed during Project construction. Electricity usage associated with lighting and electronic equipment during Project construction is not easily quantifiable and thus considered speculative. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption.

Table IV.M-1
Summary of Energy Use During Project Construction[a]

Fuel Type	Quantity
Electricity	
Water Consumption	39,876 kWh
Lighting, electronic equipment, and other construction activities necessitating electrical power	98,482[b]
Total Electricity	**138,358 kWh**
Gasoline	
On-Road Construction Equipment	112,142 gallons
Off-Road Construction Equipment	0 gallons
Total Gasoline	**112,142 gallons**
Diesel	
On-Road Construction Equipment	317,707 gallons
Off-Road Construction Equipment	270,691 gallons
Total Diesel	**588,398 gallons**

kWh = kilowatt hours

[a] *Detailed calculations are provided in Appendix P of this Draft EIR.*

[b] *Electricity usage is based on SCAQMD construction site survey data and typical requirements for power generators. Such electricity demand would be temporary, limited, and would cease upon the completion of construction.*

Source: Eyestone Environmental, 2019.

In addition, although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (longer than 120 days) providing illumination for the site and staging areas would also comply with applicable Title 24 requirements which includes limits on the wattage allowed per specific area, which result in the conservation of energy.[43] As such, the demand for electricity during construction would not cause wasteful, inefficient, and unnecessary use of energy.

The estimated construction electricity usage represents approximately 4.7 percent[44] of the estimated net annual operational demand for the Project which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.[45]

[43] *California Building Energy Efficiency Standards, Title 24, Part 6, §110.9, §130.0, and §130.2.*

[44] *The percentage is derived by taking the total amount of electricity usage during construction (138,358 kWh) and dividing that number by the total amount of net electricity usage during operation (2,937,713 kWh) to arrive at 4.7 percent.*

[45] *LADWP, 4325 Glencoe Avenue, will serve letter from Eugene Ramirez, dated November 4, 2014.*

Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus, there would be no natural gas demand generated by Project construction.

Transportation Energy

The petroleum-based fuel use summary provided above in Table IV.M-1 on page IV.M-20 represents the amount of transportation energy that could potentially be consumed during construction of the Project based on a conservative set of assumptions, provided in Appendix P of this Draft EIR. As shown, on- and off-road vehicles would consume an estimated 112,142 gallons of gasoline and approximately 588,398 gallons of diesel fuel throughout construction of the Project. For comparison purposes, the fuel usage during construction of the Project would represent approximately 0.003 percent of the 2017 annual on-road gasoline-related energy consumption and 0.08 percent of the 2017 annual diesel fuel-related energy consumption in Los Angeles County, as shown in Appendix P of this Draft EIR.

Trucks and equipment used during proposed construction activities would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. In addition to reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to Federal fuel efficiency requirements. Therefore, Project construction activities would comply with existing energy standards with regard to transportation fuel consumption. As such, the demand for petroleum-based fuel during construction would not cause wasteful, inefficient, and unnecessary use of energy.

(ii) Operation

During operation of the Project, energy would be consumed for multiple purposes, including, but not limited to, heating/ventilating/air conditioning (HVAC); refrigeration; lighting; and the use of electronics, equipment, and machinery. Energy would also be consumed during operation of the Project related to water usage, solid waste disposal, and vehicle trips. As shown in Table IV.M-2 on page IV.M-22, development of the Project would result in a net increase of 2,938 MWh electricity per year, a net increase of 9,388,656 cf of natural gas per year, and an increased consumption of 122,304 gallons of gasoline per year and 3,746 gallons of diesel fuel per year over baseline conditions.

Table IV.M-2
Summary of Annual Net Energy Use During Project Operation[a]

Source	Estimated Energy Demand
Electricity[b]	
Building	2,443 MWh
Water	495 MWh
Total Electricity	**2,938 MWh**
Natural Gas	
Building	9,388,656 cf
Total Natural Gas	**9,388,656 cf**
Transportation	
Gasoline	122,304 gallons
Diesel	3,746 gallons
Total Transportation	**126,050 gallons**

cf = cubic feet

MWh = megawatt hours

[a] *Detailed calculations are provided in Appendix P of this Draft EIR.*

[b] *Project Design Feature GHG-PDF-3, discussed further in Section IV.D, Greenhouse Gas Emissions, states that that the Project would provide at least 20 percent EV-ready charging stations and Project Design Feature GHG-PDF-4, discussed further in Section IV.D, Greenhouse Gas Emissions, states that the Project would provide at least 5 percent EV charging stations. Providing infrastructure for EV in itself does not result in additional electricity usage.*

Source: Eyestone Environmental, 2019.

Electricity

As shown in Table IV.M-2, with compliance with 2016 Title 24 standards and applicable 2016 CALGreen requirements, buildout of the Project would result in a projected net increase in the on-site demand for electricity totaling approximately 2,938 MWh/year.

In addition to complying with CalGreen requirements, the Project Applicant would also implement Project Design Feature GHG-PDF-1, as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the buildings shall be designed and constructed to incorporate environmentally sustainable design features equivalent to a minimum LEED Silver certification under U.S. Green Building Council's LEED® Rating System for new construction. Furthermore, Project Design Features GHG-PDF-3 and GHG-PDF-4, as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, would provide for at least 20 percent of the total parking spaces provided on the Project Site to be capable of supporting EVSE and at least 5 percent of the spaces to

be equipped with EV charging stations, respectively. It is anticipated that these measures would marginally include additional usage of electricity, but that any additional electricity usage would be offset by energy savings of gasoline and diesel from the electric vehicles using the equipment.

As discussed in Section II, Project Description, of this Draft EIR, the Project would incorporate energy-efficient design methods and technologies, when feasible, such as centralized chiller plant with rooftop ventilation; high performance window glazing; undergrounding parking to reduce heat island effects; passive energy efficiency strategies, such as façade shading, roof overhangs, porches, and inner courtyards; high efficiency domestic heaters; and enhanced insulation to minimize solar heat gain. In addition, LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020. The current sources procured by LADWP include wind, solar, and geothermal sources. These sources accounted for 30 percent of LADWP's overall energy mix in 2017, the most recent year for which data are available.[46] This represents the available off-site renewable sources of energy that would meet the Project's energy demand. Furthermore, the Project would comply with Section 110.10 of Title 24, which includes mandatory requirements for solar-ready buildings, which requires the Project to provide conduits on the roof of the proposed buildings that is appropriate for future photovoltaic and solar thermal collectors, and, as such, would not preclude the potential use of alternate energy sources.

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity.[47,48] As such, the Project-related annual electricity consumption of 2,938 MWh/year would represent approximately 0.013 percent of LADWP's projected sales in 2023 (the Project's build out year). In addition, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage.

Natural Gas

As provided in Table IV.M-2 on page IV.M-22, buildout of the Project is projected to generate a net increase in the on-site demand for natural gas (e.g., water heater, stove/oven, boilers, etc.) totaling approximately 9,388,656 cf/year. In addition, the Project Applicant would implement Project Design Feature GHG-PDF-1, as set forth in Section

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[46] *California Energy Commission, Utility Annual Power Content Labels for 2017, www.energy.ca.gov/pcl/labels/, accessed February 13, 2019.*

[47] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[48] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1.*

IV.D, Greenhouse Gas Emissions, of this Draft EIR, which provides that the buildings be designed and constructed to incorporate environmentally sustainable design features equivalent to a minimum Silver certification under U.S. Green Building Council's LEED Rating System for new construction. Project Design Feature GHG-PDF-2 included in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, would prohibit the installation of hearths (woodstove and fireplaces) in all residential units.

As stated above, the Project's estimated net demand for natural gas is 9,388,656 cf/year, or approximately 25,722 cf/day. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within SoCalGas' planning area will be approximately 2.50 billion cf/day in 2023 (the Project's buildout year).[49] The Project would account for approximately 0.001 percent of the 2023 (the Project's buildout year) forecasted consumption in SoCalGas' planning area. In addition, SoCalGas has confirmed that the Project's natural gas demand can be served by the natural gas facilities in the vicinity of the Project Site.[50]

Transportation Energy

During operation, Project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. As discussed in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, the Project is located in an area well-served by public transit provided by Metro, LADOT's Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus. Specifically, the Project Site is currently served by a total of 12 bus routes. In addition, the Project would encourage and promote bicycle use through the provision of approximately 724 bicycle parking spaces (658 long-term spaces and 66 short-term spaces) for the proposed residential uses and approximately 28 bicycle parking spaces for the proposed retail and restaurant uses. Additionally, the Project Site was designed to encourage walkability.

The Project would encourage and promote walkability in the vicinity of the Project Site. As discussed in Section II, Project Description, of this Draft EIR, an enhanced streetscape and a landscaped public plaza, would be provided at the northwest corner of the Project Site, along Maxella Avenue, that would connect to a landscaped pedestrian paseo. From there, the pedestrian paseo would extend south to a proposed publicly accessible, privately maintained open space area that would be provided near the southwest corner of the Project Site. Trees, including palm, pine, fig, gum, fern, cajeput,

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[49] *California Gas and Electric Utilities, 2018 California Gas Report p. 100. Interpolated between 2022 and 2025 estimates.*

[50] *Southern California Gas Company, Will Serve Letter Request for – Job ID# 43-2015-01-00019: 4325 Glencoe Avenue. Marina Del Rey, CA 90292, will serve letter from Pedro Reyes, dated January 28, 2015.*

carrotwood, octopus, strawberry, and olive trees, and other landscaping features would also be planted throughout the Project Site and along Maxella Avenue and Glencoe Avenue to activate these streets and provide support a pedestrian-friendly environment. In total, the Project would provide approximately 70,175 square feet of open space in accordance with the open space requirements set forth in the Los Angeles Municipal Code. Moreover, the Project would provide residential amenities including pools, landscaped paseos, and seating areas. Thus, the Project would encourage and promote walkability in the vicinity of the Project Site.

The Project would also incorporate characteristics that would reduce vehicle trips and VMT as compared to standard ITE trip generation rates. Specifically, the Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which identifies the VMT and vehicle trips reductions for the Project Site relative to the standard trip and VMT rates in CalEEMod, which corresponds to reductions relative to GHG emissions. These characteristics would, therefore, result in a corresponding reduction in VMT and vehicle trips and associated transportation energy consumption and, therefore, reduce the inefficient, wasteful, and unnecessary use of energy. Measures applicable to the Project include the following:

- **Increase Density (LUT-1):** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from zero dwelling units per acre and 45 jobs per acre to approximately 109 dwelling units per acre and 12 jobs per acre.

- **Increase Diversity of Urban and Suburban Developments (Mixed-Uses) (LUT-3):** The Project would introduce new uses on the Project Site, including new residential uses. The Project would co-locate complementary residential, retail, and restaurant land uses in proximity to other existing off-site residential and commercial uses. The increases in land use diversity and mix of uses on the Project Site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, which would result in corresponding reductions in transportation-related emissions.

- **Increase Transit Accessibility (LUT-5):** The Project would be located approximately 0.25 mile from the several Metro, LADOT Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus routes. The Project would also provide adequate bicycle parking spaces for residential and commercial uses to encourage utilization of alternative modes of transportation.

- **Improve Design of Development (LUT-9)**: The Project would include improved design elements, including developing ground floor retail and restaurant uses and paved plazas with seating, landscaped paseos, and landscaped open space, which would enhance walkability in the vicinity of the Project Site. The Project would also locate a development in an area with approximately 107 intersections per square mile which improves street accessibility and connectivity.

- **Provide Pedestrian Network Improvements (SDT-1):** Providing pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets encourages people to walk instead of drive. The Project would provide an internal pedestrian network that links to the existing off-site pedestrian network including existing off-site sidewalks, to encourage and increase pedestrian activities in the area, which would further reduce VMT and associated transportation-related emissions. Furthermore, the Project would result in an improved and aesthetically appealing streetscape that would promote pedestrian activity.

As such, the Project's siting would minimize transportation fuel consumption through the reduction of VMT, as described above and discussed further in Section IV.C, Greenhouse Gas Emissions, of this Draft EIR.

As summarized in Table IV.M-2 on page IV.M-22, when accounting for the measures that would be implemented to reduce VMT, the Project's estimated net petroleum-based fuel usage would be approximately 122,304 gallons of gasoline and 3,746 gallons of diesel per year, or a total of 126,050 gallons of petroleum-based fuels annually. For comparison purposes, the transportation-related fuel usage for the Project would represent approximately 0.003 percent of the 2017 annual on-road gasoline- related energy consumption 0.001 of the diesel-related energy consumption in Los Angeles County, as shown in Appendix P of this Draft EIR.

(iii) Summary of Energy Requirements and Energy Use Efficiencies

Appendix F recommends quantification of a project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed. The Project's energy requirements were calculated based on the methodology contained in CalEEMod for electricity and natural gas usage. Project VMT data was calculated based on CAPCOA guidelines. The calculations also took into account energy efficiency measures such as Title 24, CalGreen and vehicle fuel economy standards. Quantification of energy requirements associated with Project removal were not calculated, as they are speculative. Table IV.M-1 on page IV.M-20 and Table IV.M-2 provide a summary of Project construction and operational (which includes maintenance) energy usage, respectively. During Project construction activities, a total of 138,358 kWh of electricity, 112,142 gallons of gasoline, and 588,398 gallons of diesel is

estimated to be consumed during construction of the Project. During Project operations, development of the Project would result in a net increase of 2,938 MWh electricity per year, a net increase of 9,388,656 cf of natural gas per year, and an increased consumption of 122,304 gallons of gasoline per year and 3,746 gallons of diesel fuel per year over baseline conditions.

(b) The effects of the project on local and regional energy supplies and on requirements for additional capacity

(i) Construction

During construction of the Project, electricity would be intermittently consumed to supply and convey water for dust control primarily related to the excavation phase and a minimal amount may be used to power lighting, electronic equipment, and other construction activities necessitating electrical power. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. The estimated construction electricity usage represents approximately 4.7 percent[51] of the estimated net annual operational demand for the Project which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.[52] Furthermore, the electricity demand during construction would be off-set with the removal of the existing uses. Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus there would be no natural gas demand generated by construction. Transportation fuel usage during Project construction activities would represent approximately 0.003 percent of the 2017 annual on-road gasoline-related energy consumption and 0.08 percent of the 2017 diesel fuel-related energy consumption within Los Angeles County, respectively. **As energy consumption during Project construction activities would be relatively negligible, the Project would not have a significant effect on regional energy consumption in years during the construction period.**

(ii) Operation

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout

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[51] *The percentage is derived by taking the total amount of electricity usage during construction (138,358 kWh) and dividing that number by the total amount of net electricity usage during operation (2,937,713 kWh) to arrive at 4.7 percent.*

[52] *LADWP, 4325 Glencoe Avenue, will serve letter from Eugene Ramirez, dated November 4, 2014.*

year) will be 23,033 GWh of electricity.[53,54] As such, the Project-related annual electricity consumption of 2,938 MWh/year would represent approximately 0.013 percent of LADWP's projected sales in 2023 (the Project's build out year). In addition, LADWP confirmed that the Project's electricity demand can be served by the facilities in the vicinity of the Project Site.[55] Furthermore, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage and would result in a net reduction of electricity usage. Additionally, the Project would implement any necessary connections and upgrades required by LADWP to ensure that LADWP would be able to adequately serve the Project. **Therefore, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's electricity demand.**

As summarized in Table IV.M-2 on page IV.M-22, the Project's estimated net demand for natural gas is 9,388,656 cf/year, or approximately 25,722 cf/day. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within SoCalGas' planning area will be approximately 2.50 billion cf/day in 2023 (the Project's buildout year).[56] The Project would account for approximately 0.001 percent of the 2023 (the Project's buildout year) forecasted consumption in SoCalGas' planning area. In addition, SoCalGas confirmed that the Project's natural gas demand can be served by the natural gas facilities in the vicinity of the Project Site.[57] Furthermore, the Project would implement any necessary connections and upgrades required by SoCalGas to ensure that SoCalGas would be able to adequately serve the Project. **Thus, it is anticipated that SoCalGas' existing and planned natural gas supplies would be sufficient to support the Project's net increase in demand for natural gas.**

In sum, energy consumption during Project operations would be relatively negligible and energy requirements are within LADWP's and SoCalGas' service provision.

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[53] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[54] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1.*

[55] *LADWP, 4325 Glencoe Avenue, will serve letter from Eugene Ramirez, dated November 4, 2014.*

[56] *California Gas and Electric Utilities, 2018 California Gas Report p. 100. Interpolated between 2022 and 2025 estimates.*

[57] *Southern California Gas Company, Will Serve Letter Request for – Job ID# 43-2015-01-00019: 4325 Glencoe Avenue. Marina Del Rey, CA 90292, will serve letter from Pedro Reyes, dated January 28, 2015.*

(c) The effects of the project on peak and base period demands for electricity and other forms of energy

As discussed above, electricity demand during construction and operation of the Project would have a negligible effect on the overall capacity of LADWP's power grid and base load conditions. With regard to peak load conditions, the LADWP power system experienced an all time high peak of 6,432 MW on August 31, 2017.[58] The LADWP also estimates a peak load based on two years of data known as base case peak demand to account for typical peak conditions. Based on LADWP estimates for 2017, the base case peak demand for the power grid is 5,854 MW.[59] Under peak conditions, the Project would represent approximately 0.01 percent of the LADWP base peak load conditions. In addition, LADWP's annual growth projection in peak demand of the electrical power grid of 0.4 percent would be sufficient to account for future electrical demand by the Project.[60] Therefore, Project electricity consumption during operational activities would have a negligible effect on peak load conditions of the power grid.

(d) The degree to which the project complies with existing energy standards

Construction equipment would comply with energy efficiency requirements contained in the Federal Energy Independence and Security Act or previous Energy Policy Acts for electrical motors and equipment.[61] Electricity and natural gas usage during Project operations presented in Table IV.M-2 on page IV.M-22 would comply with 2016 Title 24 standards and applicable 2016 CalGreen requirements and Los Angeles Green Building Code. Therefore, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage.

With regard to transportation fuels, trucks and equipment used during proposed construction activities, the Project would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling (i.e., reducing idling would also result in reductions in diesel usage) and emissions regulations would also result in efficient use of construction-related energy, especially during peak demand. During Project operations, vehicles travelling to and from the Project Site are assumed to comply with CAFE fuel economy standards. Project-related vehicle trips would also comply with Pavley which is designed to reduce vehicle GHG emissions and would

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[58] *LADWP, 2017 Retail Electric Sales and Demand Forecast, p. 6.*

[59] *LADWP, 2017 Retail Electric Sales and Demand Forecast. p. 6.*

[60] *LADWP, 2017 Retail Electric Sales and Demand Forecast. p. 6.*

[61] *Energy Independence and Security Act of 2007. Pub.L. 110-140.*

also result in fuel savings in addition to CAFÉ standards as vehicles would be more fuel efficient.

Based on the above, Project construction and operational activities would comply with existing energy standards with regards to electricity and natural gas usage, as well as transportation fuel consumption.

(e) Effects of the Project on Energy Resources

As discussed above, LADWP's electricity generation is derived from a mix of non-renewable and renewable sources such as coal, natural gas, solar, geothermal wind and hydropower. The LADWP's most recently adopted 2017 Power Strategic Long-Term Resources Plan identifies adequate resources (natural gas, coal) to support future generation capacity.

Natural gas supplied to Southern California is mainly sourced from out of state with a small portion originating in California. Sources of natural gas for the Southern California region are obtained from locations throughout the western United States as well as Canada.[62] According to the U.S. Energy Information Administration (EIA), the United States currently has over 80 years of natural gas reserves based on 2015 consumption.[63] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years. Therefore, Project construction and operation activities would have a negligible effect on natural gas supply.

Transportation fuels (gasoline and diesel) are produced from crude oil which is imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of consumption.[64] Project-related vehicle trips would comply with CAFE fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). In addition, Project-related vehicle trips would also comply with Pavley which is designed to reduce vehicle GHG emissions and would also result in fuel savings in addition to CAFE standards, as vehicles would be more fuel efficient. Therefore, Project construction and operation activities would have a negligible effect on the transportation fuel supply.

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[62] *California Gas and Electric Utilities, 2018 California Gas Report.*

[63] *U.S. Energy Information Administration, Frequently Asked Questions, www.eia.gov/tools/faqs/faq.php?id=58&t=8, accessed February 13, 2019.*

[64] *BP Global, Oil reserves, www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil/oil-reserves.html, accessed February 13, 2019.*

As discussed above in the Regulatory Framework, one of the objectives of SB 350 is to increase procurement of California's electricity from renewable sources from 33 percent to 50 percent by 2030. Accordingly, LADWP is required to procure at least 50 percent of their energy portfolio from renewable sources by 2030. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources account for 30 percent of LADWP's overall energy mix in 2017, the most recent year for which data are available.[65] This represents the available off-site renewable sources of energy that would meet the Project's energy demand.

With regard to on-site renewable energy sources, as required by 2016 Title 24, the Project would include the provision of conduit on the roof of the proposed buildings that is appropriate for future photovoltaic and solar thermal collectors. However, due to the Project Site's location, other on-site renewable energy sources would not be feasible to install on-site as there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydroelectric, digester gas, fuel cells, landfill gas, municipal solid waste, ocean thermal, ocean wave, methane, and tidal current technologies, or multi-fuel facilities using renewable fuels. Furthermore, wind-powered energy is not viable on the Project Site due to the lack of sufficient wind in the Los Angeles basin. Specifically, based on a map of California's wind resource potential, the Project Site is not identified as an area with wind resource potential.[66]

(f) The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives

As discussed above, the Project would include project features to reduce vehicle miles travelled during operational activities. As discussed in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, the Project is located in an area well-served by public transit provided by Metro, LADOT's Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus. Specifically, the Project Site is currently served by a total of 12 bus routes. In addition, the Project would encourage and promote bicycle use through the provision of approximately 724 bicycle parking spaces (658 long-term spaces and 66 short-term spaces) for the proposed residential uses and approximately 28 bicycle parking spaces for the proposed retail and restaurant uses. As shown in the CalEEMod runs provided in Appendix P of this Draft EIR, buildout of the Project is projected to generate an annual VMT of 7,150,753 miles. This results in a reduction of approximately 60 percent in

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[65] *California Energy Commission, Utility Annual Power Content Labels for 2017, www.energy.ca.gov/pcl/labels/, accessed February 13, 2019.*

[66] *CEC, National Renewable Energy Laboratory (NREL) Wind Prospector, https://maps.nrel.gov/wind-prospector/#/?aL=kM6jR-%255Bv%255D%3Dt%26kM6jR-%255Br%255D%3Dt%26qCw3hR%255Bv%255D%3Dt%26qCw3hR%255Bd%255D%3D1%26qCw3hR%255Br%255D%3Dt&bL=groad&cE=0&lR=0&mC=34.09773289693434%2C-118.32507133483887&zL=14, accessed February 13, 2019.*

comparison to a standard project within the air basin as measured by the air quality model (CalEEMod), with a corresponding reduction in the Project's petroleum-based fuel usage. Therefore, the Project would encourage the use of efficient transportation alternatives.

(g) The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements

The current City of LA Green Building Code requires compliance with CalGreen and California's Building Energy Efficiency Standards (Title 24). In addition to compliance with Title 24 and CalGreen requirements, the Project would also implement Project Design Feature GHG-PDF-1, as set forth in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, which states that the buildings shall be designed and constructed to incorporate environmentally sustainable design features equivalent to a minimum LEED® Silver certification under U.S. Green Building Council's LEED® Rating System for new construction.

The City has also adopted several plans and regulations to promote the reduction, reuse, recycling, and conversion of solid waste going to disposal systems. These regulations include the City of Los Angeles Solid Waste Management Policy Plan, the RENEW LA Plan, and the Exclusive Franchise System Ordinance (Ordinance No. 182,986). These solid waste reduction programs and ordinances help to reduce the number of trips associated with hauling solid waste, thereby reducing the amount of petroleum-based fuel consumed. Furthermore, recycling efforts indirectly reduce the energy necessary to create new products made of raw material, which is an energy-intensive process. Thus, through compliance with the City's construction-related solid waste recycling programs, the Project would contribute to reduced fuel-related energy consumption.

With implementation of these features along with complying with state and local energy efficiency standards, the Project would meet and/or exceed all applicable energy conservation policies and regulations.

(h) Whether the Project conflicts with adopted energy conservation plans

As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the city has published the LA Green Plan/ClimateLA in 2007 which outlines goals and actions by the City to reduce GHG emissions. To facilitate implementation of the LA Green Plan/Climate LA, the City adopted the Green Building Code. The Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the 2016 CALGreen Code and California's Building Energy Efficiency Standards, which have been incorporated into the City of Los Angeles Green Building Code.

The Project would be consistent with regional planning strategies that address energy conservation. As discussed above and in Section IV.G, Land Use, of this Draft EIR, SCAG's 2016–2040 RTP/SCS focuses on creating livable communities with an emphasis on sustainability and integrated planning, and identifies mobility, economy, and sustainability as the three principles most critical to the future of the region. As part of the approach, the 2016–2040 RTP/SCS focuses on reducing fossil fuel use by decreasing VMT. The Project would be consistent with the energy efficiency policies emphasized in the 2016–2040 RTP/SCS. Most notably, the Project represents an infill development within the Palms–Mar Vista–Del Rey Community Plan area of the City of Los Angeles that would concentrate new residential and commercial (retail/restaurant) uses within a HQTA, which is defined by the 2016-2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. The Project Site is located approximately 0.25 mile from the several Metro, LADOT Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus routes. This is evidenced by the Project Site's location within a designated HQTA. This would serve to reduce the transportation fuel associated with VMT. The introduction of new housing and job opportunities within a HQTA, as proposed by the Project, is consistent with numerous policies in the 2016 RTP/SCS related to locating new housing and jobs near transit. The 2016 RTP/SCS would result in an estimated 8-percent decrease in VMT by 2020, an 18-percent decrease in VMT by 2035, and a 21-percent decrease in VMT by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the state's GHG emission reduction goals. Thus, consistent with both the 2016 RTP/SCS and CARB's updated targets adopted in March 2018, the Project would reduce VMT by 60 percent in comparison to a standard project as estimated by CalEEMod, and, consequently, the Project's petroleum-based fuel usage would be reduced. In addition, the Project would comply with state energy efficiency requirements, would be capable of achieving at least current LEED® Silver equivalent status, and would use electricity from LADWP, which has a current renewable energy mix of 30 percent. All of these features would serve to reduce the consumption of electricity, natural gas, and transportation fuel. Based on the above, the Project would be consistent with adopted energy conservation plans.

(l) Conclusion Regarding Significance Threshold No. 1

As demonstrated in the analysis of the eight criteria discussed above, the Project would not cause wasteful, inefficient, and unnecessary consumption of energy during construction or operation. The Project's energy requirements would not significantly affect local and regional supplies or capacity. The Project's energy usage during peak and base periods would also be consistent with electricity and natural gas future projections for the

region. Electricity generation capacity and supplies of natural gas and transportation fuels would also be sufficient to meet the needs of Project-related construction and operations. During operations, the Project would comply with existing energy efficiency requirements such as CalGreen as well as include energy conservation measures beyond requirements such as LEED Silver equivalency. In summary, the Project's energy demands would not significantly affect available energy supplies and would comply with existing energy efficiency standards. **Therefore, Project impacts related to energy use under Significance Threshold No. 1 would be less than significant during construction and operation.**

(2) Infrastructure Capacity

Significance Threshold No. 2: Would the Project result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

(a) Construction

(i) Electricity

As discussed above, construction activities at the Project Site would require minor quantities of electricity for lighting, power tools and other support equipment. Heavy construction equipment would be powered with diesel fuel.

During Project construction activities, electricity usage represents 4.7 percent[67] of the estimated net annual operational demand for the Project which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.[68] Moreover, construction electricity usage would replace the existing electricity usage at the Project Site during construction since the existing on-site uses which currently generate a demand for electricity would be removed. Existing off-site infrastructure would not have to be expanded or newly developed to provide electrical service to the project during construction or demolition. **Therefore, the Project would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

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[67] *The percentage is derived by taking the total amount of electricity usage during construction (138,358 kWh) and dividing that number by the total amount of net electricity usage during operation (2,937,713 kWh) to arrive at 4.7 percent.*

[68] *LADWP, 4325 Glencoe Avenue, will serve letter from Eugene Ramirez, dated November 4, 2014.*

With regard to existing electrical distribution lines, the Applicant would be required to coordinate electrical infrastructure removals or relocations with LADWP and comply with site-specific requirements set forth by LADWP, which would ensure that service disruptions and potential impacts associated with grading, construction, and development within LADWP easements are minimized. **As such, construction of the Project is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses or utility system capacity.**

(ii) Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus there would be no demand generated by construction. However, the Project would involve installation of new natural gas connections to serve the Project Site. Since the Project Site is located in an area already served by existing natural gas infrastructure, it is anticipated that the Project would not require extensive off-site infrastructure improvements to serve the Project Site. Construction impacts associated with the installation of natural gas connections are expected to be confined to trenching in order to place the lines below surface. In addition, prior to ground disturbance, Project contractors would notify and coordinate with SoCalGas to identify the locations and depth of all existing gas lines and avoid disruption of gas service to other properties. **Therefore, construction of the Project would not result in an increase in demand for natural gas to affect available supply or distribution infrastructure capabilities and would not result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

(b) Operation

(i) Electricity

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity. As such, the Project-related annual electricity consumption of 2,938 MWh/year would represent approximately 0.013 percent of LADWP's projected sales in 2023 (the Project's build out year). In addition, LADWP confirmed that the Project's electricity demand can be served by the facilities in the vicinity of the Project Site. Furthermore, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage and would result in a net reduction of electricity usage. Additionally, the Project would implement any necessary connections and upgrades required by LADWP to ensure that LADWP would be able to adequately serve the Project. Therefore, it is anticipated that LADWP's existing and planned electricity

capacity and electricity supplies would be sufficient to support the Project's electricity demand.

(ii) Natural Gas

The Project's estimated net demand for natural gas is 9,388,656 cf/year, or approximately 25,722 cf/day, which represents approximately 0.001 percent of the 2023 (the Project's buildout year) forecasted consumption in SoCalGas' planning area. In addition, SoCalGas confirmed that the Project's natural gas demand can be served by the natural gas facilities in the vicinity of the Project Site.[69] **Therefore, it is anticipated that SoCalGas' existing and planned natural gas supplies would be sufficient to support the Project's net increase in demand for natural gas.**

(c) Conclusion Regarding Significance Threshold No. 2

As demonstrated in the analysis above, construction and operation of the Project would not result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. **Therefore, Project impacts related to energy infrastructure capacity would be less than significant during construction and operation.**

e. Cumulative Impacts

(1) Significance Threshold No. 1 (Wasteful, Inefficient and Unnecessary use of Energy)

Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. Based on the information presented in Section III, Environmental Setting, of this Draft EIR, there are 39 related projects located within the vicinity of the Project Site. The geographic context for the cumulative impact analysis on electricity is the service area of LADWP, and the geographic context for the cumulative impact analysis on natural gas is the service area of SoCalGas. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of County-wide consumption. The Project in conjunction with forecasted 2023 growth in these geographies would cumulatively increase the consumption of energy, thus potentially resulting in cumulative

[69] *Southern California Gas Company, Will Serve Letter Request for Job ID# 43-2015-01-00019: 4325 Glencoe Avenue. Marina Del Rey, CA 90292, will serve letter from Pedro Reyes, dated January 28, 2015.*

impacts with respect to energy use. Cumulative growth in the greater Project area through 2023 includes general ambient growth projected to occur, as described in Section III, Environmental Setting, of this Draft EIR. These related projects primarily include retail, restaurant, residential, and office uses.

(a) Electricity

Although Project development would result in the use of renewable and non-renewable electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the Project more energy-efficient, and would be consistent with growth expectations for LADWP's service area. The Project also would incorporate energy efficiency measures to make the Project capable of achieving LEED Silver equivalency, as required by Project Design Feature GHG-PDF-1. Furthermore, as with the Project, during construction and operation, other future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary.

Additionally, as discussed above, LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources accounted for 30 percent of LADWP's overall energy mix in 2017, the most recent year for which data are available.[70] This represents the available off-site renewable sources of energy that could meet the Project's and related projects energy demand. Therefore, the Project and related projects would comply with energy conservation plans and efficiency standards required to ensure that energy is used efficiently. **As such, the Project's contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of electricity would not be cumulatively considerable and, thus, cumulative impacts with respect to electricity use would be less than significant.**

(b) Natural Gas

Although Project development would result in the use of natural gas resources, which could limit future availability, the use of such resources would be on a relatively small scale, would be reduced by measures rendering the Project more energy-efficient, and would be consistent with regional and local growth expectations for SoCalGas' service area. The Project also would incorporate energy efficiency measures to make the Project capable of achieving LEED Silver equivalency, as required by Project Design Feature

[70] *California Energy Commission, Utility Annual Power Content Labels for 2017, www.energy.ca.gov/pcl/labels/, accessed February 13, 2019.*

GHG-PDF-1 and reduce natural gas usage by limiting the number of natural gas fueled fireplaces, as required by Project Design Feature GHG-PDF-2. Furthermore, future development projects would be expected to incorporate energy conservation features, comply with applicable regulations including CALGreen and State energy standards under Title 24, and incorporate mitigation measures, as necessary. Therefore, the Project and related projects would comply with energy conservation plans and efficiency standards required to ensure that energy is used efficiently. **As such, the Project's contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of natural gas would not be cumulatively considerable and, thus, cumulative impacts with respect to natural gas use would be less than significant.**

(c) Transportation Energy

Buildout of the Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. At buildout, the Project's estimated petroleum-based fuel usage would be approximately 122,304 gallons of gasoline and 3,746 gallons of diesel per year, or a total of 126,050 gallons of petroleum-based fuels annually. For comparison purposes, the transportation-related fuel usage for the Project would represent approximately 0.003 percent of the 2017 annual on-road gasoline- related energy consumption 0.001 of the diesel-related energy consumption in Los Angeles County, as shown in Appendix P of this Draft EIR.

Related projects in the Project vicinity would also be infill projects locating uses near other residential and commercial uses which would reduce distance travelled as well as consumption of transportation fuel. As analyzed above, Project transportation fuel usage would represent a small percentage of total fuel consumption within Los Angeles County. While it is speculative to assess transportation fuel usage from related projects, it is expected that cumulative transportation fuel usage resulting from the Project and related projects would be consistent with projections discussed above.

Additionally, as described above, petroleum currently accounts for 90 percent of California's transportation energy sources; however, over the last decade the state has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled which would reduce reliance on petroleum fuels. According to the CEC, gasoline consumption has declined by 6 percent since 2008, and the CEC predicts that the demand for gasoline will continue to decline over the next 10 years and that there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity. As with the Project, other future development projects would be expected to reduce VMT by encouraging the use of alternative modes of transportation and other design features that promote VMT reductions.

Furthermore, as described above, the Project would be consistent with the policies emphasized by the 2016–2040 RTP/SCS. Most notably, the Project represents an infill development within the Palms–Mar Vista–Del Rey community of the City of Los Angeles that would concentrate new residential and commercial (retail/restaurant) uses within a HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. The Project Site is located approximately 0.25 mile from the several Metro, LADOT Transit Commuter Express, Culver CityBus, and City of Santa Monica Big Blue Bus routes. This is evidenced by the Project Site's location within a designated HQTA. Although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040. Implementation of the 2016-2040 RTP/SCS would result in an estimated 8-percent decrease in per capita GHG emissions by 2020, 18-percent decrease in per capita GHG emissions by 2035, and 21-percent decrease in per capita GHG emissions by 2040. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. Implementation of the 2016-2040 RTP/SCS or the next plan is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. As discussed in Section IV.D, Greenhouse Gas Emissions, of this Draft EIR, the Project results in a VMT reduction of approximately 60 percent in in comparison to a Project without Reduction Features, which would be consistent with the reduction in transportation emission per capita provided in the 2016-2040 RTP/SCS and with CARB's updated 2035 target.

Although the 2016-2040 RTP/SCS is intended to reduce GHG emissions, the reduction in VMT would also result in reduced transportation fuel consumption. By its very nature, the 2016-2040 RTP/SCS is a regional planning tool that addresses cumulative growth and resulting environmental effects. In addition, it is assumed that related projects in the Project Site vicinity would reduce VMT, consistent with the goals of the 2016-2040 RTP/SCS. **Since the Project is consistent with the 2016–2040 RTP/SCS, its contribution to cumulative impacts related to wasteful, inefficient and unnecessary use of transportation fuel would not be cumulatively considerable and, cumulative impacts with respect to transportation energy would be less than significant.**

(d) Conclusion

Based on the analysis provided above, the Project's contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas, and petroleum-based fuel) would not result in a cumulatively considerable effect related to the wasteful, inefficient, and unnecessary consumption of energy during construction or operation. The Project's impacts would not be cumulatively

considerable, and cumulative energy impacts under Significance Threshold No. 1 are concluded to be less than significant.

(2) Significance Threshold No. 2 (Infrastructure Capacity Analysis)

(a) Electricity

Buildout of the Project, related projects, and additional forecasted growth in LADWP's service area would cumulatively increase the demand for electricity supplies and infrastructure capacity. Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2023–2024 fiscal year (the Project's buildout year) will be 23,033 GWh of electricity.[71,72] As such, the Project-related annual electricity consumption of 2,938 MWh/year would represent approximately 0.013 percent of LADWP's projected sales in 2023 (the Project's build out year) , and in general, each related project would be expected to comprise a similarly limited percentage of overall electricity consumption. Data used to develop the LADWP demand forecasts take into account population growth, energy efficiency improvements, and economic growth which includes construction projects.[73] Therefore, electricity usage resulting from future operations at many of the related projects is likely accounted for in the LADWP projections.

Electricity infrastructure is typically expanded in response to increasing demand, and system expansion and improvements by LADWP are ongoing. LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest cost and risk consistent with LADWP's environmental priorities and reliability standards. The 2017 Power Strategic Long-Term Resources Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements. Development projects within the LADWP service area would also be anticipated to incorporate site-specific infrastructure improvements, as necessary. Although detailed information regarding electrical infrastructure for each of the related projects is not known, it is expected that LADWP would provide for necessary improvements specific to each related project. Each of the related projects would be reviewed by LADWP to identify necessary power facilities and service connections to meet the needs of their respective projects. As discussed above, will serve letters are provided for individual projects which determines whether sufficient infrastructure is in place to provide electrical service to the proposed project. As part of the will serve letter process, LADWP takes into account all uses

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[71] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[72] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1.*

[73] *2016 Retail Electric Sales and Demand Forecast, City of Los Angeles Department of Water and Power, June 30, 2016.*

(including related projects) in the service area ensure that sufficient local and regional infrastructure is adequate. As the will serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not adversely affect the LADWP electrical grid. **As such, the Project's contribution to cumulative impacts with respect to electricity infrastructure would not be cumulatively considerable and, cumulative impacts with respect to electricity infrastructure would be less than significant.**

(b) Natural Gas

Buildout of the Project, related projects, and additional forecasted growth in SoCalGas' service area would cumulatively increase the demand for natural gas supplies and infrastructure capacity. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within SoCalGas' planning area will be approximately 2.50 billion cf/day in 2023 (the Project's buildout year).[74] The Project would account for approximately 0.001 percent of the 2023 (the Project's buildout year) forecasted consumption in SoCalGas' planning area, and in general, each related project would be expected to comprise a similarly limited percentage of overall natural gas consumption. Moreover, SoCalGas forecasts take into account projected population growth and development based on local and regional plans. Therefore, natural gas usage resulting from future operations at many of the related projects is likely accounted for in the SoCalGas projections.

Natural gas infrastructure is typically expanded in response to increasing demand and system expansion and improvements by SoCalGas occur as needed. It is expected that SoCalGas would continue to expand delivery capacity if necessary to meet demand increases within its service area. Although detailed information regarding natural gas infrastructure for each of the related projects is not known, it is expected that SoCalGas would provide for necessary improvements specific to each related project. Development projects within its service area, including the Project and related projects also served by the existing SoCalGas infrastructure, would also be anticipated to incorporate site-specific infrastructure improvements, as appropriate. Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the natural gas infrastructure in the Project area.

As discussed above, will serve letters are provided for individual projects which determines whether sufficient infrastructure is in place to provide natural gas service to the proposed project. As part of the will serve letter process, SoCalGas takes into account all

[74] *California Gas and Electric Utilities, 2018 California Gas Report p. 100. Interpolated between 2022 and 2025 estimates.*

uses (including related projects) in the service area ensure that sufficient local and regional infrastructure is adequate. As the will serve letter for the Project identified adequate infrastructure, construction and operation of the Project would not significantly affect the SoCalGas regional infrastructure. **As such, the Project's contribution to cumulative impacts with respect to natural gas infrastructure would not be cumulatively considerable and, cumulative impacts with respect to natural gas infrastructure would be less than significant.**

(c) Conclusion

Based on the analysis provided above, the Project's contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas) would not result in a cumulatively considerable effect related to available supply or distribution infrastructure capabilities that could result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. The Project's impacts would not be cumulatively considerable, and cumulative energy infrastructure impacts under Significance Threshold No. 2 are concluded to be less than significant.

e. Mitigation Measures

Project-level and cumulative impacts with regard to energy use and infrastructure would be less than significant. Therefore, no mitigation measures are required.

f. Level of Significance after Mitigation

a. Energy Use

Project-level and cumulative impacts related to energy use and energy infrastructure would be less than significant without mitigation.

g. Infrastructure Capacity

Project-level and cumulative impacts related to energy infrastructure would be less than significant without mitigation.