IV. Environmental Impact Analysis

N. Energy

1. Introduction

This section of the Draft EIR analyzes impacts on energy resources due to construction and operation of the Project. Section 15126.2 (b) of the California Environmental Quality Act (CEQA) Guidelines states that a project's energy use shall be analyzed to determine the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, as well as being compliant with building codes and renewable energy features. Appendix G of the *State CEQA Guidelines* checklist includes questions to assist lead agencies when assessing a project's potential energy impacts. Additionally, *State CEQA Guidelines* Appendix F provides guidance on information to use when evaluating a project's energy use.

In accordance with the applicable Appendix G sections, and utilizing guidance from Appendix F of the *State CEQA Guidelines*, this Draft EIR includes relevant information and analyses that address the energy implications of the Project, focusing on the following three energy resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). This section includes a summary of the Project's anticipated energy needs, impacts, and conservation measures. 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 energy impact calculations utilizing data from the CalEEMod output files prepared for the greenhouse gas analysis presented in **Section IV.D, Greenhouse Gas Emissions**, of this Draft EIR. The detailed energy impact calculations are included in **Appendix O** to this Draft EIR. Information found herein, as well as other aspects of the Project's energy implications, are further discussed elsewhere in this Draft EIR, including in **Section II, Project Description**, and **Section IV.D, Greenhouse Gas Emissions**. An analysis of the Project's potential impacts related to the construction and/or relocation of new or expanded energy infrastructure (i.e. electrical and natural gas supply lines) is included in **Section IV.M.4, Utilities and Service Systems – Electric Power, Natural Gas, and Telecommunications Infrastructure**, 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] When these standards are raised, automakers respond by creating a more fuel-efficient fleet. The NHTSA sets standards to increase CAFE levels rapidly over the next several years, which will improve the nation's energy security and save consumer's money at the gas pump, while also reducing greenhouse gas (GHG) emissions. In 2012, the NHTSA established final passenger car and light truck CAFE standards for model years 2017 through 2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3 to 41.0 miles per gallons (mpg). In March 2020, the U.S. Department of Transportation (USDOT) and the USEPA issued the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021 through 2026.[2]

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.[3] USEPA and NHTSA have also adopted

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1 *Federal Register, 49 U.S.C. 32902, Average Fuel Economy Standards.*

2 *Federal Register, Vol. 85, No. 84, Thursday, April 30, 2020, Rules and Regulations: United States Environmental Protection Agency 40 CFR Parts 86 and 600 and United States Department of Transportation, National Highway Traffic Safety Administration, 49 CFR Parts 523, 531, 533, 536, and 537, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Final Rule, Effective June 29, 2020.*

3 *United States Environmental Protection Agency, Office of Transportation and Air Quality, Regulatory Announcement: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles, APE-420-F-11-031, August 2011.*

the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[4]

(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."[5]

[4] *Federal Register, Vol. 81, No. 206, Tuesday, October 25, 2016, Rules and Regulations, United States Environmental Protection Agency, 40 CFR Parts 9, 22, 85, 86, 600, 1033, 1036, 1037, 1039, 1042, 1043, 1065, 1066, and 1068, and Department of Transportation, National Highway Traffic Safety Administration, 49 CFR Parts 523, 534, 535, and 538, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Effective December 27, 2016.*

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

(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 first adopted to ensure that building construction, 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 2019 Title 24 standards, which became effective on January 1, 2020.[6] The 2019 Title 24 standards continue to improve upon the 2016 Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings which includes efficiency improvements to the residential Standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the Nonresidential Standards include alignment with the American Society of Heating and Air-Conditioning Engineers *(*ASHRAE) 90.1 2017 national standards.[7]

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

The most recent update for the California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is the 2019 CALGreen Code, which went into effect on January 1, 2020.[8] The purpose of the CALGreen Code is to encourage sustainable construction practices in planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The 2019 CALGreen Code includes mandatory measures for residential and non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality.[9] The 2019

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[6] *California Energy Commission, Building Energy Efficiency Standards for Residential and Nonresidential Buildings, for the 2019 Building Energy Efficiency Standards, Title 24, Part 6, and Associated Administrative Regulations in Part 1, December 2018.*

[7] *California Energy Commission, 2019 Residential Compliance Manual for the 2019 Building Energy Efficiency Standards, December 2018; and 2019 Nonresidential Compliance Manual for the 2019 Building Energy Efficiency Standards, December 2018.*

[8] *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11.*

[9] *California Building Standards Commission, Guide to the 2019 California Green Building Standards Code Nonresidential, January 2017.*

CALGreen Code improves upon the 2016 CALGreen Code by updating standards for bicycle parking, electric vehicle charging, and water efficiency and conservation.

(b) California's Renewable Portfolio Standard

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) require retail sellers of electric services to source at least 33 percent of energy from eligible renewable energy resources by 2020.[10] The California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) jointly implement the RPS. 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.[11] 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

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of our electricity from renewable sources from 33 percent to 50 percent by 2030; 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.[12]

(d) Senate Bill 100

Senate Bill (SB) 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's Renewable Portfolio Standard 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 of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.[13]

[10] *California Public Utilities Commission, California Renewables Portfolio Standard (RPS), Website Homepage, accessed October 2019.*
[11] *California Public Utilities Commission, California Renewables Portfolio Standard (RPS), Website Homepage, accessed October 2019.*
[12] *Senate Bill 350 (2015-2016 Reg. Session) Stats 2015, Ch. 547.*
[13] *Senate Bill 100 (2017-2018 Reg. Session) Stats 2018, Ch. 312.*

(e) Assembly Bill 32 (California Global Warming Solutions Act of 2006) and Senate Bill 32

As discussed in **Section IV.D**, **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 1990 greenhouse gas (GHG) levels by 2020. To achieve these goals, AB 32 tasked the CPUC and 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.

SB 32, signed September 8, 2016, updates AB 32 (the Global Warming Solutions Act) to include an emissions reductions goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

(f) Assembly Bill 1493 (Pavley I)

AB 1493 (commonly referred to as CARB's Pavley regulations) was the first state 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.[14] 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.[15]

(g) Executive Order S-1-07 (California 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.[16] Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other

[14] *California Air Resources Board, Clean Car Standards—Pavely, Assembly Bill 1943.*
[15] *California Air Resources Board, Clean Car Standards—Pavely, Assembly Bill 1943.*
[16] *California, Office of the Governor, Executive Order S-01-07, Low Carbon Fuel Standard, January 18, 2007.*

companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.[17]

(h) California Air Resources Board

(i) Advanced Clean Cars Regulation

The Advanced Clean Car Standards emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations. 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 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emission Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulations to require manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.[18] In particular, implementation of the ZEV and PHEV regulations reduce transportation fuel consumption by increasing the number of vehicles that are partially or fully electric-powered.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act. The withdrawal of the waiver was effective November 26, 2019. In response, several states, including California, filed a lawsuit challenging the withdrawal of the EPA waiver. As of October 2020, a trial date has not been set for the lawsuit.

(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, California Code of Regulations, 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.

[17] *California, Office of the Governor, Executive Order S-01-07, Low Carbon Fuel Standard, January 18, 2007.*

[18] *California Air Resources Board, California's Advanced Clean Cars Program, 2012.*

(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 (California Code of Regulations, Title 13, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NOX) 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 (SB 375)

The Sustainable Communities and Climate Protection Act of 2008, or 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), which is required by the state and federal government, that will achieve GHG emission reduction targets set by CARB for the years 2020 and 2035 by reducing vehicle miles travelled (VMT) from light duty vehicles through the development of more compact, complete, and efficient communities. The SCS also contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets.[19]

The City of Los Angeles and, thus, all projects are located within the MPO area of the Southern California Association of Governments (SCAG). SCAG's compliance with SB 375, through preparation of a Regional Transportation Plan/Sustainable Communities Strategy, is described below under the regional regulatory setting.

(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

[19] *California, State Bill 375, The Sustainable Communities and Climate Protection Act of 2008, 2008.*

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

SB 1389 (Public Resources Code Sections 25300–25323) requires the development of an integrated plan for electricity, natural gas, and transportation fuels. Under the bill, 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 2017 Power Strategic Long-Term Resource Plan, addresses a variety of issues including greenhouse gas emissions reductions, ensuring grid reliability, increasing renewable resources, once-through-cooling, and the *California Energy Demand Forecast*.[20]

(l) California Environmental Quality Act

In accordance with the California Environmental Quality Act (CEQA) Appendix F, Energy Conservation, of the *State CEQA Guidelines*, and the applicable provisions of Appendix G, in order to assure that energy implications are considered in project decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* provides a list of energy-related topics that should be analyzed in the EIR. In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides several topics that the lead agency may consider in the discussion of energy use in an EIR, where topics are applicable or relevant to the Project. These topics are discussed below in Section 3(d), Analysis of Project Impacts. Refer to Section **IV.M.4, Utility and Service Systems – Electric Power, Natural Gas, and Telecommunications Infrastructure**, of this Draft EIR for a discussion of the potential impacts of the Project's capacity demands on the electric power, natural gas, and telecommunication service facilities serving the Project Site.

(3) Regional

As required by SB 375, SCAG's first-ever SCS was included in the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (2012–2035 RTP/SCS), which was adopted by SCAG in April 2012. The SCS goals and policies that reduce VMT (and result in corresponding decreases in transportation-related fuel consumption) focus on transportation and land use planning and include building infill projects, locating residents closer to where they work and play, and designing communities with access to high quality

[20] *California Energy Commission, 2017 Power Strategic Long-Term Resource Plan, December 2017.*

transit service. SCAG has since adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS).[21] The goals and policies of the 2016-2040 RTP/SCS build from the previous 2012-2035 RTP/SCS and provide strategies for reducing per capita VMT, which results in corresponding decreases in per capita transportation-related fuel consumption. These strategies include: 1) Reflect the Changing Population And Demands; 2) Focus New Growth Around Transit; 3) Plan for Growth Around Livable Corridors; 4) Provide More Options for Short Trips; and 5) Support Local Sustainability Planning. 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 VMT.

On September 3, 2020, SCAG approved and adopted the Connect SoCal 2020–2045 RTP/SCS. The 2020–2045 RTP/SCS is currently pending certification by CARB. Similar to the 2016-2040 RTP/SCS, the newly adopted 2020-2045 RTP/SCS encompasses and builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The plan lays out a strategy for the region to meet CARB greenhouse gas reduction targets at eight percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. In addition, the plan anticipates a 25.7 percent decrease in time spent in traffic delay per capita and a five percent decrease in daily miles driven per capita from 2016 to 2045.

(4) Local

(a) City of Los Angeles Green Building Code

On December 27, 2019, the Los Angeles City Council approved Ordinance No. 186,488, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, to alter certain provisions of Article 9 to reflect local administrative changes and incorporate by reference portions of the 2019 CALGreen Code. Projects filed on or after January 1, 2020, must comply with the provisions of the Los Angeles Green Building Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) non-

[21] *Southern California Association of Governments, 2016-2040 RTP/SCS, April 2016.*

residential and high-rise residential buildings; and (3) additions and alterations to non-residential and high-rise residential buildings. LAMC Article 9, Division 5 includes measures for newly constructed non-residential and high-rise residential buildings. The Los Angeles Green Building Code includes some requirements that are more stringent than state requirements such as increased requirements for electric vehicle charging spaces and water efficiency, which results in potentially greater energy demand reductions from improved transportation fuel efficiency and water efficiency.

(b) 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] In 1989, California enacted AB 939, the California Integrated Waste Management Act which establishes a hierarchy for waste management practices such as source reduction, recycling, and environmentally safe land disposal.[23]

The City implements various programs and ordinances related to solid waste. These include: (1) the City of Los Angeles Solid Waste Management Policy Plan, adopted in 1993, which is a long-range policy plan that proposes an approach for the City to achieve a goal of 90-percent diversion by 2025; (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 No. 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;[24] 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, but also help to reduce the energy used to process solid waste.

[22] *American Geosciences Institute, "How Does Recycling Save Energy?"*
[23] *CalRecycle, History of California Solid Waste Law, 1885-1989.*
[24] *The California Integrated Waste Management Act of 1989 (AB 939), as amended, was enacted to reduce, recycle, and reuse solid waste generation in the state. AB 939 requires city and county jurisdictions to divert 50 percent of the total waste stream from landfill disposal.*

In addition, while not an adopted regulatory plan, L.A.'s Green New Deal (Sustainable City pLAn 2019) further accelerates the following goals: a 95 percent diversion rate by 2035 and a 100 percent diversion rate by 2050; a reduction of municipal solid waste generation per capita by at least 15 percent, including phasing out of single-use plastics, by 2028; the elimination of organic waste going to landfill by 2028; and increased proportion of waste products and recyclables productively reused and/or repurposed within L.A. County to at least 25 percent by 2025 and 50 percent by 2035.

b) Existing Conditions

(1) Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, 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, serving approximately four million people within a service area of approximately 465 square miles. 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. Approximately 32 percent of LADWP's 2018 electricity purchases were from renewable sources, which is similar to the 31 percent statewide percentage of electricity

purchases from renewable sources.[25] Furthermore, LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020[26] and is committed to meeting the requirement of the RPS Enforcement Program to use at least 50 percent of the state's energy from renewables by 2030.[27] The current sources procured by LADWP include wind, solar, and geothermal sources. These sources represent the available off-site renewable sources of energy that would meet the Project's energy demand. Additionally, LADWP is on track to meet 65 percent or more energy from renewable sources by 2036 through the commission of large-scale solar projects (Moapa Southern Paiute Solar, Copper Mountain 3 Solar), expansion of customer-owned rooftop and ground-mounted solar projects, and construction of a new geothermal project in Imperial County.[28]

The Project Site receives electric power service from LADWP via existing overhead lines along Mateo and Imperial Streets. Based on the CalEEMod outputs prepared for the greenhouse gas emissions analysis (see **Appendix E**), the existing warehouse use associated with the Project Site is estimated to consume approximately 403,958 kilowatt hours (kWh) of electricity per year (335,320 kWh/year associated with direct electrical consumption and 68,638 kWh/year associated with water consumption[29]).[30]

(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.

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[25] *California Energy Commission, Utility Annual Power Content Labels for 2018, July 2019.*

[26] *Data for 2020 has not been published yet; however, LADWP had achieved 32 percent renewable energy source by 2018 (the most recent year with data available). Source: California Energy Commission, Utility Annual Power Content Labels for 2018, July 2019.*

[27] *City of Los Angeles, Department of Water and Power, Renewables Portfolio Standard.*

[28] *City of Los Angeles, Department of Water and Power, News Releases, LADWP Achieves 25 Percent Renewable Energy Milestone.*

[29] *Consistent with CalEEMod, electricity usage associated with the delivery, treatment, and distribution of water within Southern California is equivalent to 0.0111 kWh per indoor gallon and 0.009727 kWh per outdoor gallon.*

[30] *Calculated energy consumption rounded to the nearest hundred. Detailed energy calculation sheets are provided in **Appendix O** of this Draft EIR.*

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 21.8 million customers in more than 500 communities encompassing approximately 24,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.[31]

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.[32] The traditional southwestern United States sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply 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.[33]

The Project Site receives natural gas service from SoCalGas through local distribution lines underneath the adjacent public streets. Based on the CalEEMod outputs prepared for the greenhouse gas emissions analysis (see **Appendix E**), the existing warehouse use associated with the Project Site is estimated to consume approximately 543,218 cubic feet (cf) of natural gas per year (1,488 cf of natural gas per day[34]).[35]

(3) Transportation Energy

According to the California Energy Commission (CEC), transportation accounted for nearly 41.1 percent of California's total energy consumption in 2017.[36] Petroleum-based fuels currently account for 90 percent of California's transportation energy sources.[37] 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.

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[31] *Southern California Gas Company, Company Profile Website, accessed: July 13, 2020.*
[32] *California Gas and Electric Utilities, 2018 California Gas Report, page 80.*
[33] *California Gas and Electric Utilities, 2018 California Gas Report, page 80-81.*
[34] *Daily consumption was determined by dividing the yearly consumption amount by 365 days/year.*
[35] *Calculated energy consumption rounded to the nearest hundred. Detailed energy calculation sheets are provided in **Appendix O** of this Draft EIR.*
[36] *California Energy Commission, 2019 Integrated Energy Policy Report, adopted February 20, 2020, Figure ES-2, page 4.*
[37] *California Energy Commission, 2016-2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program, March 2016.*

Accordingly, gasoline consumption in California has declined.[38] 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, such as natural gas, biofuels, and electricity.[39] Revisions to EPA fuel economy testing methods in 2006 as well as to manufacturing calculations in 2017 have also resulted in improved fuel efficiency of gasoline- and diesel-powered vehicles, resulting in a reduction of fuel consumption. According to fuel sales data from the California Energy Commission, fuel consumption in Los Angeles County was approximately 3.64 billion gallons of gasoline and 527 million gallons of diesel fuel in 2018.[40] Gasoline-fueled vehicles accounted for approximately 93.90 percent of the total VMT for 2018 and diesel-fueled vehicles accounted for approximately 5.44 percent of the total VMT.[41] Electric vehicles account for approximately 0.66 percent of the total VMT.

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. Based on the CalEEMod outputs prepared for the greenhouse gas emissions analysis (see **Appendix E**), the estimated annual VMT associated with the existing Project Site uses is 526,035 VMT per year. Assuming the same percentages of gasoline- and diesel-fueled VMT as was documented for 2018, this translates to approximately 20,307 gallons of gasoline and 2,176 gallons of diesel consumed per year.[42]

3. Project Impacts

a) Thresholds of Significance

Appendix G of the *State CEQA Guidelines* provides checklist items for the evaluation of impacts related to energy resources. In addition, Appendix F of the *State CEQA Guidelines* was prepared in response to the requirement in Public Resources Code Section 21100(b)(3) that an EIR shall include "[m]itigation measures proposed to minimize the significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."

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

39 *California Energy Commission, 2015 Integrated Energy Policy Report.*

40 *California Energy Commission, California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2018. Diesel is adjusted to account for retail (48%) and non-retail (52%) diesel sales.*

41 *Based on the California Air Resources Board on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2018). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT.*

42 *According to the California Air Resources Board on-road vehicle emissions factor (EMFAC2017) model, the average fuel economy (weighted for total VMT) for the fleet-wide mix of vehicles operating in Los Angeles County was approximately 24.32 miles per gallon for gasoline-fueled vehicles and approximately 13.16 miles per gallon for diesel-fueled vehicles in 2018.*

In analyzing potential impacts regarding energy, the City has determined to use the Appendix G questions as the thresholds of significance for the Project. The factors below from the L.A. CEQA Thresholds Guide will be used to assist in analyzing the Appendix G questions.

Accordingly, the Project would have a significant impact related to energy if it would:

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

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

With regard to Threshold (a), this analysis relies upon Appendix F of the CEQA Guidelines which 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 effects of the environment, including, but not limited to, measures to reduces 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 features and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

In accordance with Appendix F and the L.A. CEQA Thresholds Guide, the following factors will be considered 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; and*
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; and*
8. *Whether the project conflicts with adopted energy conservation plans.*

With regard to Threshold (b), the Project is evaluated for consistency with adopted energy conservation plans and policies relevant to the Project. Such adopted energy conservation plans and policies include Title 24 energy efficiency requirements, CALGreen and City building codes. While not an adopted plan, L.A.'s Green New Deal (Sustainable City pLAn 2019) accelerates GHG-reduction goals through milestones and initiatives to, among other things, increase renewable energy supply and reduce building energy use, water consumption, and per capita VMT, including through reduction in the amount of solid waste generated. Also, as discussed in **Section IV.D, Greenhouse Gas Emissions**, of this Draft EIR, the Project would be consistent with the SCAG 2016-2040 RTP/SCS, which includes goals to reduce VMT and corresponding reduction in fuel consumption.

b) Methodology

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. Specific analysis methodologies are discussed below. Detailed supporting calculations are provided in **Appendix O** of this Draft EIR, and are based on the same assumptions as are used in **Section IV.A, Air Quality**, **Section IV.D, Greenhouse Gas Emissions**, and **Section IV.K, Transportation**, of this Draft EIR.

(1) Construction

Construction electricity was estimated for lighting and construction equipment that would use electricity as an alternative to diesel fuel and for water usage from dust control. Calculations assumptions were based on CalEEMod (Version 2016.3.2) models prepared

for the air quality and greenhouse gas emissions analyses presented in **Section IV.A, Air Quality,** and **Section IV.D, Greenhouse Gas Emissions,** of this Draft EIR, respectively. CalEEMod is a state-approved emissions model that, in addition to outputting emissions, also provides for estimation of annual electricity, natural gas, and water use. Electricity demand by construction equipment was estimated using default horsepower and load factors from CalEEMod and Project-specific construction schedules and hours for a diesel generator. As SCAQMD recommends the use of electricity from LADWP instead of diesel generators, the equivalent use of electrical power was assumed for the Project.

Construction activities typically do not involve the consumption of natural gas; therefore, consumption of natural gas during construction is not an energy demand that requires quantification or analysis.

Fuel consumption from construction worker, vendor, and delivery/haul trucks was 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 determined by CARB's EMFAC2017 model for 2021 (the construction start year). EMFAC provides the total annual VMT and fuel consumed for each type of vehicle. CalEEMod default trip lengths were used for worker commutes and vendor trips, however, a longer, more conservative, Project-specific trip length (30 miles to Sunshine Canyon Landfill) for haul trips during demolition and grading was used. Consistent with CalEEMod, construction worker trips were assumed to include a mix of light duty gasoline automobiles and light duty gasoline trucks. Construction vendor and delivery/haul trucks were assumed to be heavy-duty diesel trucks. Refer to **Appendix O** of this Draft EIR for detailed energy calculations.

(2) Operation

Annual consumption of electricity (including electricity usage associated with the supply and conveyance of water) and natural gas from Project operation was calculated using demand factors provided in CalEEMod, which are based on the 2016 Title 24 standards and went into effect on January 1, 2017. The CEC estimated that the 2016 Title 24 standards are 28 percent more efficient than the 2013 Title 24 standards for residential construction and five percent more efficient for non-residential construction.[43] It should be noted that the 2016 Title 24 standards have been superseded by the 2019 Title 24 standards; however, CalEEMod has not yet been updated to incorporate the revised standards. While the Project would be required to adhere to the 2019 Title 24 standards, the Project's estimated energy consumption was calculated based on CalEEMod land-use-based demand factors, which, as described, incorporate the standards and

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

regulations of the 2016 Title 24 code. Because the 2019 Title 24 standards are more stringent than the 2016 version, the CalEEMod outputs and corresponding energy consumption calculations provide a more conservative estimate of the Project's energy consumption.

The Project's estimated energy demands were also analyzed relative to LADWP's and SoCalGas' existing and planned energy supplies in 2023 (i.e., the Project buildout year) to determine if these two energy utility companies would be able to meet the Project's energy demands. These calculations were used to determine if the Project causes the wasteful, inefficient, and/or unnecessary consumption of energy as required by Appendix F of the *State CEQA Guidelines*. The assessment also includes a discussion of the Project's compliance with relevant energy-related regulations that would require the Project to incorporate energy and water efficiency designs.

Energy impacts associated with transportation of residents, employees, and visitors to and from the Project Site during operation were also assessed. Daily trip generation used in this analysis was based on the Project-specific Traffic Report (see **Appendix L.1)**. The Project's daily trip generation and VMT was calculated consistent with LADOT's Transportation Impact Study Guidelines. Consistent with these guidelines, the VMT Calculator was developed by the City and LADOT to comply with SB 743, which requires lead agencies to adopt VMT criteria to determine transportation related impacts. The daily Project-related trips and VMT 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 for 2023 (the Project's buildout year) as determined by EMFAC2017. 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 O** of this Draft EIR.

c) Project Design Features

No specific project design features are proposed with regard to energy conservation and infrastructure.

d) Analysis of Project Impacts

As compared to the Project, the Increased Commercial Flexibility Option (Flexibility Option) would change the use of the second floor from residential to commercial, and would not otherwise change the Project's land uses or size. The overall commercial square footage provided would be increased by 22,493 square feet to 45,873 square feet and, in turn, there would be a reduction in the number of live/work units from 185 to 159

units. The overall building parameters would remain unchanged and the design, configuration, and operation of the Flexibility Option would be comparable to the Project. In the analysis of impacts presented below, where similarity in land uses, operational characteristics, and energy-efficient design features between the Project and the Flexibility Option would be essentially the same, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option. For those thresholds where numerical differences exist because of the differences in project parameters between the Project and Flexibility Option, the analysis is presented separately.

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

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore these analyses are presented separately.

(1) Impact Analysis

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

(a) Project

(i) 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 and operations). For purposes of this analysis, Project maintenance would include activities such as repair of structures, landscaping, and architectural coatings, which are included as part of Project operations. Project removal activities of the structures constructed under this Project would include demolition of the structures proposed by the Project at some point in the future. 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.

(a) Construction

During Project construction, 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. Construction activities, including the construction of new buildings and facilities, 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 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).

Construction would occur over approximately 24 months and is expected to be completed in 2023. **Table IV.N-1**, **Summary of Energy Use During Project Construction**, presents the estimated energy consumption during construction. As shown, construction of the Project would require a total of 216,357 kWh of electricity, 47,699 gallons of gasoline, and 97,136 gallons of diesel.

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

Source	Quantity [b]
Electricity	
Water Consumption [c]	40 kWh
Lighting, Equipment, Other Electrical Power [d]	216,317 kWh
Total Electricity	**216,357 kWh**
Gasoline	
On-Road Construction Equipment [e]	47,699 gallons
Off-Road Construction Equipment [f]	0 gallons
Total Gasoline	**47,699 gallons**
Diesel	
On-Road Construction Equipment [e]	52,039 gallons
Off-Road Construction Equipment [f]	45,097 gallons
Total Diesel	**97,136 gallons**

kWh = kilowatt hours

*a Detailed calculation sheets are provided in **Appendix O** of this Draft EIR.*

b Calculated energy consumption rounded to the nearest hundred. Addition may be off due to this rounding.

c Electricity usage associated with the supply and conveyance of water used for dust control during construction was calculated using data from the CalEEMod outputs prepared for the greenhouse gas analysis.

d Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power was calculated based on CalEEMod defaults for generators (i.e. horsepower, load factors, and

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

Source	Quantity [b]

daily usage). As the SCAQMD recommends the use of electricity instead of diesel generators, the equivalent electricity consumption was calculated.

e On-road construction equipment encompasses construction worker trips, vendor trips, and haul trips.

f Off-road construction equipment encompasses construction equipment usage on the Project Site (e.g., excavators, cranes, forklifts, etc.).

Source: EcoTierra Consulting, Inc., 2020.

(i) Electricity

During construction, electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical lines that connect to the Project Site. As shown in **Table IV.N-1**, construction of the Project would require a total of approximately 216,357 kWh of electricity. The estimated construction electricity usage over the anticipated construction period represents approximately 11.6 percent[44] of the Project's estimated net annual operational electricity demand, which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.

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. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent a small fraction of the Project's net annual operational electricity. Although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (longer than 120 days) providing illumination for the Project Site and staging areas would also comply with applicable Title 24 requirements, which includes limits on the wattage allowed per specific area, resulting in the conservation of energy.[45] In addition, 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.[46] **Therefore, the Project's electrical demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

[44] *The percentage is derived by taking the total amount of electricity usage during construction (216,357 kWh) and dividing that number by the annual amount of net electricity usage during operation (1,863,199 kWh) to arrive at 11.6 percent.*

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

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

(ii) Natural Gas

As previously detailed, 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. **Therefore, the Project's natural gas demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(iii) Transportation-Related Energy

As shown in **Table IV.N-1**, on- and off-road vehicles would consume an estimated 47,699 gallons of gasoline and approximately 97,136 gallons of diesel fuel throughout the Project's construction. For comparison purposes only and not for the purpose of determining significance, the fuel usage during Project construction would represent approximately 0.001 percent of the 2021 (the Project's construction start year) annual on-road gasoline-related energy consumption and 0.01 percent of the 2021 annual diesel fuel-related energy consumption in Los Angeles County as projected by CARB's EMFAC on-road vehicle emissions factor model.[47] Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[48]

Construction of the Project would comply with state and federal regulations, such as the anti-idling regulation in accordance with Section 2485 in Title 13 of the California Code of Regulations, and fuel requirements in accordance with Section 93115 in Title 17 of the California Code of Regulations, which would reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels, from unnecessary idling fuel combustion. While these required regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations would also result in fuel savings. Compliance with required regulations will be enforced by construction contractors. Project-related trips from on-road vehicles (i.e., haul trucks, worker vehicles) would also benefit from Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings in addition to compliance with Corporate Average Fuel Economy standards.

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[47] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2021). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.88 billion gallons of gasoline and 650 million gallons of diesel in 2021 (the Project's construction-start year).*

[48] *BP Global, Oil Reserves, 2018.*

In addition, the Project would divert mixed construction and demolition debris to City-certified construction and demolition waste processors using City-certified waste haulers, consistent with the Los Angeles City Council approved Ordinance No. 181519 (LAMC Chapter VI, Article 6, Section 66.32-66.32.5 (Purpose; Solid Waste Hauler Permit Requirements; AB 939 Compliance Fees; Violations, Penalties, and Permit Suspension and Revocation; Compliance Permit Terms and Conditions; Indemnifications, respectively). Diversion of mixed construction and demolition debris would reduce truck trips to landfills, which are typically located some distance away from City centers, and increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption. **Therefore, the Project's transportation energy demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(b) Operation

During operation of the Project, energy would be consumed for multiple purposes, including, but not limited to, heating/ventilating/air conditioning (HVAC); refrigeration; water heating; lighting; and the use of electronics, equipment, and appliances. Energy would also be consumed during Project operations related to water usage, solid waste disposal, and vehicle trips to and from the Project Site by residents, employees, and visitors. As shown in **Table IV.N-2, Summary of Net Annual New Energy Use During Project Operation**, the Project's net new energy demand would be approximately 1,863,199 kWh of electricity per year, 5,148,870 cf of natural gas per year, 106,411 gallons of gasoline per year, and 10,328 gallons of diesel fuel per year.

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

Source	Estimated Energy Demand [c]
Electricity [b]	
Structures	2,023,420 kWh
Water	243,737 kWh
Total Electricity	2,267,157 kWh
Less Existing Electricity	*403,958 kWh*
Total Net Electricity	**1,863,199 kWh**
Natural Gas [b]	
Structures	5,692,088 cf
Less Existing Natural Gas	*543,218 cf*
Total Net Natural Gas	**5,148,870 cf**
Transportation [d]	
Gasoline	126,718 gallons
Less Existing Gasoline	*20,307 gallons*
Total Net Gasoline	**106,411 gallons**

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

Source	Estimated Energy Demand [c]
Diesel	12,504 gallons
Less Existing Diesel	*2,176 gallons*
Total Net Diesel	**10,328 gallons**

kWh = kilowatt hours; cf = cubic feet
*a Detailed calculations are provided in **Appendix O** of this Draft EIR.*
b Electricity and natural gas estimates assume compliance with applicable CALGreen and Title 24, Part 6 requirements.
c Totals may be off due to rounding.
d Gasoline and diesel consumption rates were based on the Project's annual VMT, which was calculated by CalEEMod, and were calculated using the county-specific miles per gallon and fleet mix as determined by EMFAC2017 for specific years (2018 for Existing and 2023 for Operation).
Source: EcoTierra Consulting, Inc., 2020.

(i) Electricity

As shown in **Table IV.N-2**, with compliance with 2016 Title 24 standards and applicable 2016 CALGreen requirements,[49] buildout of the Project would result in a projected net increase in the on-site demand for electricity totaling approximately 1,863,199 kWh per year. 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.[50] As such, the Project-related net increase in annual electricity consumption of 1,863,199 kWh per year would represent approximately 0.008 percent of LADWP's projected sales in 2023.

In addition to complying with Title 24 standards and CALGreen requirements, the Project would also implement energy efficient water features, lighting, and mechanical equipment, which are identified as sustainable design features in compliance with code requirements, as discussed in **Section II, Project Description** of this Draft EIR. These measures would reduce the Project's energy demand. In addition, LADWP is required to procure at least 50 percent of their energy portfolio from renewable sources by 2030. The

[49] *While the Project would be required to adhere to the 2019 Title 24 standards and 2019 CALGreen requirements, the Project's estimated energy consumption was calculated based on CalEEMod land-use-based demand factors, which incorporate the standards and regulations of the 2016 Title 24 and 2016 CALGreen codes. Because the 2019 Title 24 standards and 2019 CALGreen requirements are more stringent than the 2016 versions, the CalEEMod outputs and corresponding energy consumption calculations provide a more conservative estimate of the Project's energy consumption.*

[50] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter. LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*

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.[51] This represents the available off-site renewable sources of energy that could meet the Project's energy demand. With regard to on-site renewable energy sources, as required by Title 24, the Project would include the provision of conduit that is appropriate for future photovoltaic and solar thermal collectors. **Therefore, the Project's electricity demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(ii) Natural Gas

As shown in **Table IV.N-2**, with compliance with 2016 Title 24 standards and applicable 2016 CALGreen requirements,[52] buildout of the Project would result in a projected net increase in the on-site demand for natural gas totaling approximately 5,148,870 cf per year, or approximately 14,107 cf per 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 2,480 million cf per day in 2023 (the Project's buildout year).[53] Accordingly, the Project would account for approximately 0.0006 percent of the daily 2023 forecasted consumption in SoCalGas' planning area. According to the United States Energy Information Administration (EIA), the United States currently has over 80 years of natural gas reserves based on 2018 consumption.[54] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years.

As discussed above, in addition to complying with applicable regulatory requirements regarding energy conservation (e.g., California Building Energy Efficiency Standards and CALGreen), the Project would also implement energy efficient building design (such as window glazing and window frames) and mechanical equipment, which are identified as sustainable design features in compliance with code requirements, as discussed in **Section II, Project Description**, of this Draft EIR. **Therefore, the Project's natural gas demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

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[51] *California Energy Commission, Utility Annual Power Content Labels for 2017, Exhibit 6, July 2018.*

[52] *While the Project would be required to adhere to the 2019 Title 24 standards and 2019 CALGreen requirements, the Project's estimated energy consumption was calculated based on CalEEMod land-use-based demand factors, which incorporate the standards and regulations of the 2016 Title 24 and 2016 CALGreen codes. Because the 2019 Title 24 standards and 2019 CALGreen requirements are more stringent than the 2016 versions, the CalEEMod outputs and corresponding energy consumption calculations provide a more conservative estimate of the Project's energy consumption.*

[53] *California Gas and Electric Utilities, 2018 California Gas Report, p. 102-103.*

[54] *U.S. Energy Information Administration, Frequently Asked Questions, How much natural gas does the United States have, and how long will it last?*

(iii) Transportation-Related Energy

As summarized in **Table IV.N-2**, the Project's estimated net petroleum-based fuel usage would be approximately 106,411 gallons of gasoline and 10,328 gallons of diesel per year. For comparison purposes, the fuel usage during Project operation would represent approximately 0.003 percent of the 2023 annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County, as projected by CARB's EMFAC on-road vehicle emissions factor model.[55] Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[56]

Some percentage of automobiles and trucks driven by Project residents, visitors and employees would benefit from CAFE fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicles would also benefit from auto manufacturers' compliance with Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings. Transportation fuel efficiency would improve as future Project residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency.

The Project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The Project's future residents, visitors, and employees would utilize vehicles that comply with CAFE fuel economy standards and the Pavley standards, which are designed to result in more efficient use of transportation fuels. Transportation fuel efficiency would improve as these future Project residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency. The Project's mixed-use design and its increase in density located on an infill site in close proximity to existing transit, including rail and bus lines, its proximity to existing off-site retail, restaurant, entertainment, commercial, and job destinations, and its walkable and bike-able environment support the conclusion that that the Project has been properly designed and located so that its development would achieve a reduction in VMT compared to a project with the same land uses that does not have the location-specific nor the Project design-specific benefits nor the infill nature of the Project.

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[55] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Project's buildout year).*

[56] *BP Global, Oil reserves, 2018.*

Therefore, the Project's transportation-related energy demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.

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

(a) Construction

As discussed above, electricity would be consumed during Project construction activities. 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. Electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical lines that connect to the Project Site. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. 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. As stated above, transportation fuel usage during Project construction activities would represent approximately 0.003 percent of the 2021 (the Project's construction start year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2021 annual diesel fuel-related energy consumption within Los Angeles County, respectively, as projected by CARB's EMFAC on-road vehicle emissions factor model.[57] Construction transportation energy would be provided by existing retail service stations and from existing mobile fuel services that are typically needed to deliver fuel to a construction site to refuel the off-road construction equipment at the Project Site and no new facilities would be expected to be required. **As energy consumption during construction would not be substantial, the Project would not materially affect the local and/or regional energy supplies and would not require additional capacity.**

(b) Operation

As stated above, based on LADWP's 2017 Power Strategic Long-Term Resource 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.[58] As such, the Project-related net

[57] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2021). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.88 billion gallons of gasoline and 650 million gallons of diesel in 2021 (the Project's construction-start year).*

[58] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter. LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*

increase in annual electricity consumption of 1,863,199 kWh per year would represent approximately 0.008 percent of LADWP's projected sales in 2023. Furthermore, as part of the normal building permit process, LADWP would confirm that the Project's electricity demand could be served by the existing facilities in the Project area and the Project would be required to upgrade such facilities as determined by LADWP. In addition, LADWP would review the Project's estimated electricity consumption in order to ensure that the estimated power requirement would be part of the total load growth forecast for the City and accounted for in the planned growth of the power system. Based on these factors, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to serve the Project's electricity demand.

As stated above, buildout of the Project would result in a projected net increase in the on-site demand for natural gas totaling approximately 5,148,870 cf per year, or approximately 14,107 cf per 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 2,480 million cf per day in 2023 (the Project's buildout year) and supplies in 2023 are projected to be 3,775 million cf per day.[59] This report predicts gas demand for all sectors (residential, commercial, industrial, energy generation and wholesale exports) and presents best estimates, as well as scenarios for hot and cold years. The Project would account for approximately 0.0006 percent of the 2023 forecasted consumption in SoCalGas' planning area and approximately 0.001 percent of the 1,295 million cf per day of additional supplies available,[60] and would therefore fall within SoCalGas' projected consumption and supplies for the area. Furthermore, as part of the normal building permit process, SoCalGas would confirm that the Project's natural gas demand can be served by the facilities in the Project area and the Project would be required to upgrade such facilities as determined by SoCalGas. As such, it is expected that SoCalGas' existing and planned natural gas capacity and supplies will be sufficient to serve the Project's demand.

As stated above, at buildout, the Project would consume a net increase of approximately 106,411 gallons of gasoline and 10,328 gallons of diesel per year. For comparison purposes, the transportation-related fuel usage for the Project would represent approximately 0.003 percent of the 2023 (i.e., the Project's buildout year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County, as projected by CARB's EMFAC on-road vehicle emissions factor model.[61] Operational transportation energy would be

[59] *California Gas and Electric Utilities, 2018 California Gas Report, p. 102-103.*

[60] *1,295 million cf per day of additional supplies available derived by subtracting the anticipated consumption (2,480 million cf per day) from the available supplies (3,775 million cf per day).*

[61] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are*

provided by existing retail service stations and no new retail service stations would be expected to be required. Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[62] As such, it is expected that existing and planned transportation fuel supplies will be sufficient to serve the Project's demand.

As energy consumption during operation would be relatively negligible, the Project would not affect the local and/or regional energy supplies and would not require additional capacity.

(iii) 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 the 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 6,502 MW on August 31, 2017.[63] 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 2023-2024 (the Project's buildout year), the base case peak demand for the power grid is expected to be 5,976 MW.[64] Under peak conditions, the Project would consume a net increase of 1,863,199 kWh on an annual basis which, assuming 12 hours of active electricity demand per day, would be equivalent to approximately 425 kW (peak demand assuming 4,380 hours per year of active electricity demand).[65] In comparison to the LADWP power grid base peak load of 5,976 MW for 2023-2024, the Project's estimated peak demand would represent approximately 0.007 percent of the LADWP base peak load conditions.[66] **Therefore, Project electricity consumption during operational activities would have a negligible effect on peak load conditions of the power grid.**

considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Project's buildout year).

62 *BP Global, Oil reserves, 2018.*

63 *LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, page 6.*

64 *LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*

65 *Calculated as follows: 1,863,199 kWh / 4,380 hours = 425 kW.*

66 *Calculated as follows: 425 kW / 5,976,000 kW = 0.007 percent.*

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

(a) Construction

Construction equipment would comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, the USEPA and NHSTA have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.[67] USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[68] The energy modeling for trucks does not account for specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy. **Therefore, construction of the Project would comply with existing energy standards.**

(b) Operation

Electricity and natural gas usage during Project operations would be minimized through incorporation of applicable Title 24 standards, applicable CALGreen requirements, and the Los Angeles Green Building Code, in accordance with the applicable version of these standards at the time of building permit issuance. Furthermore, the Project incorporates energy-conservation measures such as installing energy efficient appliances. The Project would also incorporate water conservation features, such as installing water-saving fixtures and implementing water-efficient landscaping techniques.

[67] *California Energy Commission, Tracking Progress – Energy Efficiency Document, Last Updated: September 2018.*
[68] *BP Global, Oil Reserves, 2018.*

With respect to operational transportation-related fuel usage, the Project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The Project's future residents, visitors, and employees would utilize vehicles that comply with CAFE fuel economy standards and the Pavley standards, which are designed to result in more efficient use of transportation fuels. Transportation fuel efficiency would improve as these future Project residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency. The Project's mixed-use design and its increase in density located on an infill site in close proximity to existing transit, including rail and bus lines, its proximity to existing off-site retail, restaurant, entertainment, commercial, and job destinations, and its walkable and bike-able environment support the conclusion that that the Project has been properly designed and located so that its development would achieve a reduction in VMT compared to a project with the same land uses that does not have the location-specific nor the Project design-specific benefits nor the infill nature of the Project. **Thus, based on the information above, operation of the Project would comply with existing energy standards.**

(v) 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 2017 Power Strategic Long-Term Resource Plan identifies adequate resources (natural gas, coal) to support future generation capacity, and, as discussed above, LADWP's existing and planned electricity capacity and supplies would be sufficient to serve the Project's electricity demand.[69] As discussed above in the Regulatory Framework subsection, one of the objectives of SB 350 was to increase the 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 its energy portfolio from renewable sources by 2030. The current sources of LADWP's renewable energy 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] These represent the available off-site renewable sources of energy that would meet the Project's energy demand. LADWP has committed to providing an increasing percentage of its energy portfolio from renewable sources so as to exceed the Renewables Portfolio Standard requirements, by increasing to 50 percent

[69] *"The 2017 [Power Strategic Long-Term Resource Plan] outlines an aggressive strategy for LADWP to accomplish its goals, comply with regulatory mandates, and provide sufficient resources over the next 20 years given the information presently available." Source: LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2016, page ES-25.*

[70] *California Energy Commission, Utility Annual Power Content Labels for 2017, Exhibit 6, July 2018.*

by 2025 (5 years before the 2030 requirement), 55 percent by 2030, and 65 percent by 2036.[71] Furthermore, with the passage of SB 100, LADWP will be required to update its long-term plans to demonstrate compliance with the update requirements including providing 60 percent of its energy portfolio from renewable sources by December 31, 2030 and ultimately planning for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. The Project would not conflict with LADWP's ability to procure the required amount of renewable energy. Therefore, the Project would support renewable energy.

As discussed above, natural gas supplied to the Southern California area is mainly sourced from out-of-state with a small portion originating in California. According to the U.S. Energy Information Administration (EIA), the United States currently has approximately 90 years of natural gas reserves based on 2018 consumption.[72] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years.[73] Therefore, Project construction and operation activities would have a negligible effect on natural gas supply.

As stated earlier, transportation fuels (gasoline and diesel) are produced from crude oil, which can be provided domestically or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[74] Therefore, Project construction and operation activities would have a negligible effect on the transportation fuel supply.

Given the evidence presented above, the Project would minimize construction and operational energy and transportation fuel demand to the extent feasible and would not substantially affect energy resources.

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

The 2016-2040 RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. As discussed in **Sections IV.A, Air Quality**, **IV.D, Greenhouse Gas Emissions**, **IV.G, Land Use and Planning**, and **IV.K, Transportation**, of this Draft EIR, the Project would be generally consistent with and

[71] *LADWP, 2017 Power Strategic Long-Term Resource Plan, December, 2016, page ES-3.*
[72] *U.S. Energy Information Administration, Frequently Asked Questions, How much natural gas does the United States have, and how long will it last?*
[73] *California Energy Commission, Tracking Progress – Energy Efficiency Document, Last Updated: September 2018.*
[74] *BP Global, Oil reserves, 2018.*

would not conflict with the general land use designation, density, and building intensity outlined in the 2016-2040 RTP/SCS. Using data collected from local jurisdictions, including General Plans, SCAG categorized existing land uses into "land use types" and then classified sub-regions into one of three land use development categories: urban, compact, or standard. SCAG used each of these three categories to describe the conditions that exist and/or are likely to exist within each specific area of the region.[75] As shown in Exhibit 13 of the 2016-2040 RTP/SCS Background Documentation, SCAG categorized the area surrounding the Project Site as a compact walkable area, generally defined as an area of new growth on the urban edge or large-scale redevelopment well served by regional and local transit service.[76] The Project would be consistent with and would not conflict with SCAG's land use types for the area and would encourage the use of alternative modes of transportation, which could result in a reduction in overall VMT of approximately 35 percent relative to a comparable project that has the same land uses and quantities as the Project, but does not have the location-specific nor the Project design-specific benefits nor the infill nature of the Project that would lead to VMT and trip reductions.[77] The Project Site is located at an infill location in developed, active area of the Central City North community that contains a mix of existing industrial, commercial, office, and residential uses. The Project would be located in an area well-served by public transit. Specifically, the Project Site is served by Metro Local Lines 18, 53, 60, 62, 66 and Metro Rapid 720 and 760. Additionally, the Project Site is located approximately one mile south of the Metro Gold Line Little Tokyo/Arts District Station. The Project would also provide bicycle storage areas for Project residents, visitors, and employees. Furthermore, the Project would provide 10 percent of its provided parking spaces with chargers for electric vehicles and 30 percent of its provided parking with conduit to accommodate installation of future chargers for electric vehicles, thereby further reducing consumption of petroleum-based fuels.

As discussed in the regulatory setting above, on September 3, 2020, SCAG approved and adopted the Connect SoCal 2020–2045 RTP/SCS. It should be noted that the circulation of the Notice of Preparation (NOP) for the Project was on February 23, 2018, which was prior to the adoption of the 2020-2045 RTP/SCS and, therefore, the analysis focuses on the Project's consistency with the 2016-2040 RTP/SCS. However, as the 2020-2045 RTP/SCS encompasses and builds upon the previous RTP/SCS, many of the same goals and strategies are similar between the two plans. As demonstrated above, the Project would be located in an area well-served by public transit provided by Metro,

[75] *Southern California Association of Governments, 2016-2040 RTP/SCS, April 2016, pages 20-21.*

[76] *Southern California Association of Governments, 2016-2040 RTP/SCS Background Documentation, April 2016, Exhibit 13 and page 42.*

[77] *Percent reduction was derived by comparing the annual VMT of the Project without the CalEEMod operational mobile mitigation (5,929,154 annual VMT) to the annual VMT of the Project with the CalEEMod operational mobile mitigation (3,853,950 VMT). Source: CalEEMod outputs prepared for the greenhouse gas analysis (see **Appendix E**).*

as well as is in proximity to several transit investment projects in planning and construction phases, including the Regional Connector and Gold Line Arts District station relocation, expansion of the West Santa Ana line into the Arts District, and recently added DASH stops by LADOT to improve service in the Arts District; the Project is comprised of a mix of uses, including commercial uses and 185 live/work units, including eleven percent set aside for (approximately 20 live/work units) deed restricted Very Low Income households; and would create a pedestrian-friendly environment through an active and transparent ground-floor design and by providing a landscaped paseo connecting Mateo Street and Imperial Street. Furthermore, the integration of land uses on the Project Site would produce substantial reductions in auto mode share to and from the Project Site that would help the region accommodate growth and promote public transit ridership that minimizes GHG emission increases and reduces per capita emissions, and would therefore not conflict with the goals of the 2020-2045 RTP/SCS.

The California Air Pollution Control Officers Association (CAPCOA) has provided guidance on mitigating or reducing emissions from land use development projects within its guidance document titled *Quantifying Greenhouse Gas Mitigation Measures*, which provides emission reduction values for recommended GHG reduction strategies.[78] The Project would be located in the Central City North area, which includes a mix of uses and amenities within walking and biking distance, as well as a major transit stop; the Project would introduce additional density and uses within close proximity to transit, and the services and destinations in the area. As such, the Project would be consistent with VMT reduction land use strategies identified by CAPCOA, which include Increased Density (LUT-1), Increased Location Efficiency (LUT-2), Increased Diversity of Urban and Suburban Developments (Mixed-Use) (LUT-3), Increased Destination Accessibility (LUT-4), Increased Transit Accessibility (LUT-5), Integrate Affordable and Below Market Rate Housing (LUT-6), and Improve Design of Development (LUT-9); as well as with the VMT reduction neighborhood/site design strategy to Provide Pedestrian Network Improvements (SDT-1) (refer to the detailed VMT analysis provided in **Section IV.D, Greenhouse Gas Emissions**, and the Traffic Report included as **Appendix L.1** of this Draft EIR.

As a result, operation of the Project would encourage reduced transportation energy and provide residents, employees, and visitors with multiple convenient alternative transportation options. **Therefore, the Project would encourage the use of efficient transportation energy use and efficient transportation alternatives.**

[78] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, 2010.*

(vii) 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 the Title 24 standards and portions of the CALGreen Code that have been adopted in LAMC Chapter 9, Article 9 (Green Building Code), and is considered to be more stringent than state requirements. The Project would minimize water demand and associated energy needed for water conveyance by including the installation of low-flow and high efficiency showerheads, toilets, and urinals; landscaping consisting of native and drought-tolerant plants; and water efficient irrigation. The HVAC system would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain.

With respect to transportation energy demand, as discussed above, the Project would represent an infill development, since it would be undertaken on a currently developed site in a developed area. In addition, it would provide a mixed-use development with increased density at a Project Site that is located near existing off-site commercial and retail destinations and in close proximity to existing public transit stops.[79] The Project would result in increased density on the Project Site, would be located in a transportation efficient area, would result in increased land use diversity and mixed-uses on the Project Site by including different types of land uses near one another, would be located in an area that offers access to multiple existing nearby destinations including retail, grocery, restaurant, office, and residential uses as well as public transit stations and stops. These land use characteristics and features would minimize VMT and are included in the transportation fuel demand for the Project's mobile sources.

With implementation of these features along with complying with state and local energy efficiency standards, the Project would exceed applicable energy conservation policies and regulations beyond identified in City requirements.

(viii) Whether the project conflicts with adopted energy conservation plans

(a) Electricity and Natural Gas

As discussed in **Section IV.C, Greenhouse Gas Emissions**, the City has published the Green New Deal (Sustainable City pLAn 2019) which outlines goals and actions by the

[79] *Public transit service in the immediate Project study area is currently provided by the Los Angeles County Metropolitan Transit Authority (Metro). The bus lines include: Metro Local Lines 18, 53, 60, 62, 66 and Metro Rapid 720 and 760. Additionally, the Project Site is located approximately one mile south of the Metro Gold Line Little Tokyo/Arts District Station.*

City to reduce GHG emissions. To facilitate implementation of these goals, 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 CALGreen Code and California's Building Energy Efficiency Standards, which have been incorporated into the City of Los Angeles Green Building Code and are a set of prescriptive standards establishing mandatory maximum energy consumption levels for buildings. The Project would comply with Title 24 energy conservation standards for insulation, glazing, lighting, shading, and water and space heating systems in all new construction. Specifically, the Project would include installation of energy efficient heating and cooling systems, appliances (e.g., Energy Star®), equipment, and control systems, low-flow water-use fixtures, and energy-efficient pumps and motors for waste and storm water conveyance, fire water, and domestic water, thereby reducing water consumption and water heating fuel (natural gas).

Based on the above, the Project is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of electricity and natural gas resources.

(b) Petroleum-Based Fuels

California is currently 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. Overall, gasoline consumption in California has declined and the CEC predicts that the demand for gasoline will continue to decline over the next ten years. Eventually, there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity. As detailed above, the Project would be consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*. Specifically, the Project would: increase the job and resident density of the Project Site (LUT-1); increase the diversity of the Project Site's land use (LUT-3); locate uses in proximity to transit (LUT-5); include design elements to maximize walkability and accessibility (LUT-9); provide direct linkage to the existing pedestrian network (SDT-1); and include a TDM Program to reduce peak hour vehicular traffic (SDT-2).

The Project would also be consistent with and not in conflict with regional planning strategies that address transportation fuel conservation. As discussed above, 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,

encouraging the reduction of building energy use, and increasing use of renewable sources. The Project's mixed-use design and its increase in density located on an infill site in proximity to transit, including rail and bus lines, its proximity to existing off-site retail, grocery, restaurant, office, and residential uses, and its walkable and bike-able environment support the conclusion from this analysis that the Project has been properly designed and located so that its development would achieve a reduction in VMT compared to a project with the same land uses that does not have the location-specific nor the Project design-specific benefits nor the infill nature of the Project. These land use characteristics would minimize the Project's VMT and are included in the transportation fuel demand for the Project's mobile sources. Such reductions in VMT would also be consistent with the goals of L.A.'s Green New Deal (Sustainable City pLAn 2019), which, while not an adopted regulatory plan, accelerates GHG reduction targets through milestones and initiatives designed to increase housing built in close proximity to transit as well as reduce per capita VMT, including through reductions and eventual elimination of solid waste generation.

Based on the above, the Project is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of transportation fuel resources.

Threshold a) Conclusion - Project

As demonstrated by the analyses of the eight *State CEQA Guidelines* Appendix F criteria discussed above, the Project would not result in a wasteful, inefficient, or unnecessary consumption of energy during construction or operation. The Project's energy requirements would not substantially affect local or regional supplies or capacity. The Project's energy usage during peak and base periods would also not conflict with electricity, natural gas, and transportation fuel 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 and exceed existing minimum energy efficiency requirements such as the Title 24 standards and CALGreen Code, in accordance with the applicable version of these standards at the time of building permit issuance. In summary, the Project's energy demands would not substantially affect available energy supplies and would comply with existing energy efficiency standards. **Therefore, Project impacts related to wasteful, inefficient, and unnecessary consumption of energy would be less than significant during construction and operation.**

(b) Increased Commercial Flexibility Option

(i) 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

As for the Project, the analysis below includes the Flexibility Option's energy requirements and energy use efficiencies by fuel type for each stage of the Flexibility Option (construction and operations). For purposes of this analysis, Flexibility Option maintenance would include activities such as repair of structures, landscaping, and architectural coatings, which are included as part of Flexibility Option operations. Flexibility Option removal activities of the structures constructed under the Flexibility Option would include demolition of the structures proposed by the Flexibility Option at some point in the future. However, it is not known when the Flexibility Option would be removed. Therefore, analysis of energy usage related to Flexibility Option removal activities would be speculative. For this reason, energy usage related to Flexibility Option removal was not analyzed.

(a) Construction

In the same manner as the Project, construction of the Flexibility Option would consume electricity and petroleum-based fuels. Construction activities do not typically do not involve the consumption of natural gas. The Flexibility Option would have the same construction schedule (approximately 24 months with completion in 2023) and disturb the same amount of soil as the Project; therefore, it would consume the same amount of electricity as the Project. However, as shown on **Table IV.N-3, Summary of Energy Use During Flexibility Option Construction**, variations in the number of construction worker, delivery, and haul trips would result in a reduction in the amount of gasoline and an increase in the amount of diesel that would be consumed. As shown in **Table IV.N-3**, construction of the Flexibility Option would require a total of 216,357 kWh of electricity, 44,959 gallons of gasoline, and 97,317 gallons of diesel.

Table IV.N-3
Summary of Energy Use During Flexibility Option Construction [a]

Source	Quantity [b]
Electricity	
Water Consumption [c]	40 kWh
Lighting, Equipment, Other Electrical Power [d]	216,317 kWh
Total Electricity	**216,357 kWh**
Gasoline	
On-Road Construction Equipment [e]	44,959 gallons

Table IV.N-3
Summary of Energy Use During Flexibility Option Construction [a]

Source	Quantity [b]
Off-Road Construction Equipment [f]	0 gallons
Total Gasoline	**44,959 gallons**
Diesel	
On-Road Construction Equipment [e]	52,221 gallons
Off-Road Construction Equipment [f]	45,097 gallons
Total Diesel	**97,317 gallons**

kWh = kilowatt hours
*a Detailed calculation sheets are provided in **Appendix O** of this Draft EIR.*
b Calculated energy consumption rounded to the nearest hundred. Addition may be off due to this rounding.
c Electricity usage associated with the supply and conveyance of water used for dust control during construction was calculated using data from the CalEEMod outputs prepared for the greenhouse gas analysis.
d Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power was calculated based on CalEEMod defaults for generators (i.e. horsepower, load factors, and daily usage). As the SCAQMD recommends the use of electricity instead of diesel generators, the equivalent electricity consumption was calculated.
e On-road construction equipment encompasses construction worker trips, vendor trips, and haul trips.
f Off-road construction equipment encompasses construction equipment usage on the Project Site (e.g., excavators, cranes, forklifts, etc.).
Source: EcoTierra Consulting, Inc., 2020.

(i) Electricity

During construction, electricity would be supplied to the Project Site by LADWP and would be obtained from the existing electrical lines that connect to the Project Site. As shown in **Table IV.N-3**, construction of the Flexibility Option would require a total of approximately 216,357 kWh of electricity. The estimated construction electricity usage over the anticipated construction period represents approximately 10.5 percent[80] of the Flexibility Option's estimated net annual operational electricity demand, which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.

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. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent

[80] *The percentage is derived by taking the total amount of electricity usage during construction (216,357 kWh) and dividing that number by the annual amount of net electricity usage during operation (2,058,131 kWh) to arrive at 10.5 percent.*

a small fraction of the Flexibility Option's net annual operational electricity. Although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (longer than 120 days) providing illumination for the Project Site and staging areas would also comply with applicable Title 24 requirements, which includes limits on the wattage allowed per specific area, resulting in the conservation of energy.[81] In addition, 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.[82] **Therefore, the Flexibility Option's electrical demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(ii) Natural Gas

As previously detailed, 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 Flexibility Option construction activities; thus, there would be no natural gas demand generated by construction. **Therefore, the Flexibility Option's natural gas demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(iii) Transportation-Related Energy

As shown in **Table IV.N-3**, on- and off-road vehicles would consume an estimated 44,959 gallons of gasoline, and approximately 97,317 gallons of diesel fuel throughout the Flexibility Option's construction. For comparison purposes only and not for the purpose of determining significance, the fuel usage during Flexibility Option construction would represent approximately 0.001 percent of the 2021 (the Flexibility Option's construction start year) annual on-road gasoline-related energy consumption and 0.01 percent of the 2021 annual diesel fuel-related energy consumption in Los Angeles County as projected by CARB's EMFAC on-road vehicle emissions factor model.[83] Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[84]

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

82 *Energy Independence and Security Act of 2007. (Pub.L. 110-140).*

83 *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2021). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.88 billion gallons of gasoline and 650 million gallons of diesel in 2021 (the Flexibility Option's construction-start year).*

84 *BP Global, Oil Reserves, 2018.*

Construction of the Flexibility Option would comply with state and federal regulations, such as the anti-idling regulation in accordance with Section 2485 in Title 13 of the California Code of Regulations, and fuel requirements in accordance with Section 93115 in Title 17 of the California Code of Regulations, which would reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels, from unnecessary idling fuel combustion. While these required regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations would also result in fuel savings. Compliance with required regulations will be enforced by construction contractors. Flexibility Option-related trips from on-road vehicles (i.e., haul trucks, worker vehicles) would also benefit from Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings in addition to compliance with Corporate Average Fuel Economy standards.

Therefore, the Flexibility Option's transportation energy demand during construction would not result in the wasteful, inefficient, and unnecessary consumption of energy.

(b) Operation

In the same manner as the Project, operation of the Flexibility Option would consume electricity, natural gas, and petroleum-based fuels. However, as shown in **Table IV.N-4, Summary of Net Annual New Energy Use During Flexibility Option Operation**, variations in land uses proposed under the Flexibility Option as compared to the Project would result in an increase in the consumption of electricity, a decrease in the consumption of natural gas, and an increase in the consumption of petroleum-based fuels. As shown in **Table IV.N-4**, the Flexibility Option's net new energy demand would be approximately 2,058,131 kWh of electricity per year, 5,093,055 cf of natural gas per year, 106,534 gallons of gasoline per year, and 10,341 gallons of diesel fuel per year.

Table IV.N-4
Summary of Net Annual Energy Use During Flexibility Option Operation [a]

Source	Estimated Energy Demand [c]
Electricity [b]	
Structures	2,185,249 kWh
Water	276,840 kWh
Total Electricity	2,462,089 kWh
Less Existing Electricity	*403,958 kWh*
Total Net Electricity	**2,058,131 kWh**
Natural Gas [b]	
Structures	5,636,273 cf

Table IV.N-4
Summary of Net Annual Energy Use During Flexibility Option Operation [a]

Source	Estimated Energy Demand [c]
Less Existing Natural Gas	*543,218 cf*
Total Net Natural Gas	**5,093,055 cf**
Transportation [d]	
Gasoline	126,841 gallons
Less Existing Gasoline	*20,307 gallons*
Total Net Gasoline	**106,534 gallons**
Diesel	12,517 gallons
Less Existing Diesel	*2,176 gallons*
Total Net Diesel	**10,341 gallons**

kWh = kilowatt hours; cf = cubic feet
*a Detailed calculations are provided in **Appendix O** of this Draft EIR.*
b Electricity and natural gas estimates assume compliance with applicable CALGreen and Title 24, Part 6 requirements.
c Totals may be off due to rounding.
d Gasoline and diesel consumption rates were based on the Project's annual VMT, which was calculated by CalEEMod, and were calculated using the county-specific miles per gallon and fleet mix as determined by EMFAC2017 for specific years (2018 for Existing and 2023 for Operation).
Source: EcoTierra Consulting, Inc., 2020.

(i) Electricity

As shown in **Table IV.N-4**, with compliance with 2016 Title 24 standards and applicable 2016 CALGreen requirements,[85] buildout of the Flexibility Option would result in a projected net increase in the on-site demand for electricity totaling approximately 2,058,131 kWh per year. 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.[86] As such, the Flexibility Option-related net increase in annual electricity consumption of 2,058,131 kWh per year would represent approximately 0.009 percent of LADWP's projected sales in 2023.

[85] *While the Flexibility Option would be required to adhere to the 2019 Title 24 standards and 2019 CALGreen requirements, the Flexibility Option's estimated energy consumption was calculated based on CalEEMod land-use-based demand factors, which incorporate the standards and regulations of the 2016 Title 24 and 2016 CALGreen codes. Because the 2019 Title 24 standards and 2019 CALGreen requirements are more stringent than the 2016 versions, the CalEEMod outputs and corresponding energy consumption calculations provide a more conservative estimate of the Flexibility Option's energy consumption.*

[86] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter. LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*

In addition to complying with Title 24 standards and CALGreen requirements, the Flexibility Option would also implement energy efficient water features, lighting, and mechanical equipment, which are identified as sustainable design features in compliance with code requirements, as discussed in **Section II, Project Description** of this Draft EIR. These measures would reduce the Flexibility Option's energy demand. In addition, 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 accounted for 30 percent of LADWP's overall energy mix in 2017, the most recent year for which data are available.[87] This represents the available off-site renewable sources of energy that could meet the Flexibility Option's energy demand. With regard to on-site renewable energy sources, as required by Title 24, the Flexibility Option would include the provision of conduit that is appropriate for future photovoltaic and solar thermal collectors. **Therefore, the Flexibility Option's electricity demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(ii) Natural Gas

As shown in **Table IV.N-4**, with compliance with 2016 Title 24 standards and applicable 2016 CALGreen requirements,[88] buildout of the Flexibility Option would result in a projected net increase in the on-site demand for natural gas totaling approximately 5,093,055 cf per year, or approximately 13,954 cf per 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 2,480 million cf per day in 2023 (the Flexibility Option's buildout year).[89] Accordingly, the Flexibility Option would account for approximately 0.0006 percent of the daily 2023 forecasted consumption in SoCalGas' planning area. According to the United States Energy Information Administration (EIA), the United States currently has approximately 90 years of natural gas reserves based on 2018 consumption.[90] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years.

As discussed above, in addition to complying with applicable regulatory requirements regarding energy conservation (e.g., California Building Energy Efficiency Standards and

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87 *California Energy Commission, Utility Annual Power Content Labels for 2017, Exhibit 6, July 2018.*

88 *While the Flexibility Option would be required to adhere to the 2019 Title 24 standards and 2019 CALGreen requirements, the Flexibility Option's estimated energy consumption was calculated based on CalEEMod land-use-based demand factors, which incorporate the standards and regulations of the 2016 Title 24 and 2016 CALGreen codes. Because the 2019 Title 24 standards and 2019 CALGreen requirements are more stringent than the 2016 versions, the CalEEMod outputs and corresponding energy consumption calculations provide a more conservative estimate of the Flexibility Option's energy consumption.*

89 *California Gas and Electric Utilities, 2018 California Gas Report, p. 102-103.*

90 *U.S. Energy Information Administration, Frequently Asked Questions, How much natural gas does the United States have, and how long will it last?*

CALGreen), the Flexibility Option would also implement energy efficient building design (such as window glazing and window frames) and mechanical equipment, which are identified as sustainable design features in compliance with code requirements, as discussed in **Section II, Project Description**, of this Draft EIR. **Therefore, the Flexibility Option's natural gas demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

(iii) Transportation-Related Energy

As summarized in **Table IV.N-4**, the Flexibility Option's estimated net petroleum-based fuel usage would be approximately 106,534 gallons of gasoline per year, and 10,341 gallons of diesel per year. For comparison purposes, the fuel usage during Flexibility Option operation would represent approximately 0.003 percent of the 2023 (i.e., the Flexibility Option's buildout year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County as projected by CARB's EMFAC on-road vehicle emissions factor model.[91] Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[92]

Some percentage of automobiles and trucks driven by Flexibility Option residents, visitors and employees would benefit from CAFE fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Flexibility Option-related vehicles would also benefit from auto manufacturers' compliance with Pavley and Low Carbon Fuel Standards which are designed to reduce vehicle GHG emissions, but would also result in fuel savings. Transportation fuel efficiency would improve as future Flexibility Option residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency.

The Flexibility Option would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The Flexibility Option's future residents, visitors, and employees would utilize vehicles that comply with CAFE fuel economy standards and the Pavley standards, which are designed to result in more efficient use of transportation fuels. Transportation

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[91] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Flexibility Option's buildout year).*

[92] *BP Global, Oil reserves, 2018.*

fuel efficiency would improve as these future Flexibility Option residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency. The Flexibility Option's mixed-use design and its increase in density located on an infill site in close proximity to existing transit, including rail and bus lines, its proximity to existing off-site retail, restaurant, entertainment, commercial, and job destinations, and its walkable and bike-able environment support the conclusion that that the Flexibility Option has been properly designed and located so that its development would achieve a reduction in VMT compared to a project with the same land uses that does not have the location-specific nor the Flexibility Option design-specific benefits nor the infill nature of the Flexibility Option. **Therefore, the Flexibility Option's transportation-related energy demand during operation would not result in the wasteful, inefficient, and unnecessary consumption of energy.**

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

(a) Construction

As detailed above, construction of the Flexibility Option would consume electricity and transportation fuel[93] and operation of the Flexibility Option would consume electricity, natural gas, and transportation fuel in the same manner and in similar but slightly different amounts as the Project.

As with the Project, during construction, electricity would be supplied to the Project Site by LADWP from existing electrical lines and transportation energy would be provided by existing retail service stations and from existing mobile fuel services. As under the Project, the electricity demand of the Flexibility Option would vary throughout the construction period, would be short-term and cease upon completion of construction, and would be powered off when not in use so as to avoid unnecessary energy consumption. As stated above, transportation fuel usage during Flexibility Option construction activities would represent approximately 0.001 percent of the 2021 (the Flexibility Option construction start year) annual on-road gasoline-related energy consumption and 0.01 percent of the 2021 annual diesel fuel-related energy consumption in Los Angeles County as projected by CARB's EMFAC on-road vehicle emissions factor model.[94] Construction transportation energy would be provided by existing retail service stations and from

[93] *Construction activities do not typically consume natural gas.*

[94] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2021). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.88 billion gallons of gasoline and 650 million gallons of diesel in 2021 (the Flexibility Option's construction-start year).*

existing mobile fuel services that are typically needed to deliver fuel to a construction site to refuel the off-road construction equipment at the Project Site and no new facilities would be expected to be required. **As energy consumption during construction would not be substantial, the Flexibility Option would not materially affect the local and/or regional energy supplies and would not require additional capacity.**

(b) Operation

Based on LADWP's forecasts for total energy sales in the 2023–2024 fiscal year (the Flexibility Option's buildout year), the Flexibility Option-related net increase in annual electricity consumption of 2,058,131 kWh would represent approximately 0.009 percent of LADWP's projected sales in 2023. As with the Project, LADWP would review the Flexibility Option's estimated electricity consumption in order to ensure that the estimated power requirement would be part of the total load growth forecast for the City and accounted for in the planned growth of the power system and the Flexibility Option would be required to upgrade local electrical facilities the serve the Project Site as determined by LADWP as part of the normal building permit process. Based on these factors, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to serve the Flexibility Option's electricity demand.

Based on the California Energy and Electric Utilities' estimates of natural gas consumption within SoCalGas' planning area, the Flexibility Option's net increase in annual natural gas consumption of 5,093,055 cf (13,954 cf per day), would account for approximately 0.0006 percent of the 2023 forecasted consumption in SoCalGas' planning area and approximately 0.001 percent of the additional supplies available, and would therefore fall within SoCalGas' projected consumption and supplies for the area. As with the Project, as part of the normal building permit process, SoCalGas would confirm that the Flexibility Option's natural gas demand can be served by the facilities in the area and the Flexibility Option would be required to upgrade such facilities as determined by SoCalGas. As such, it is expected that SoCalGas' existing and planned natural gas capacity and supplies will be sufficient to serve the Project's demand.

The fuel usage during operation of the Flexibility Option would represent approximately 0.003 percent of the 2023 (i.e., the Flexibility Option's buildout year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County.[95] As discussed for the Project,

[95] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Flexibility Option's buildout year).*

based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption of transportation fuels.[96] Based on these factors, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies, SoCalGas' existing and planned natural gas capacity and supplies, and existing and planned transportation fuel supplies would be sufficient to serve the Flexibility Option's energy demand.

As with the Project, energy consumption during construction and operation of the Flexibility Option would not be substantial and would, therefore, not materially affect the local and/or regional energy supplies and would not require additional capacity.

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

Under peak conditions, the Flexibility Option would consume a net increase of 2,058,131 kWh on an annual basis which, assuming 12 hours of active electricity demand per day, would be equivalent to approximately 470 kW (peak demand assuming 4,380 hours per year of active electricity demand).[97] In comparison to the LADWP power grid base peak load of 5,976 MW for 2023-2024,[98] the Flexibility Option's estimated peak demand would represent approximately 0.008 percent of the LADWP base peak load conditions.[99] **As with the Project, Flexibility Option electricity consumption during operational activities would have a negligible effect on peak load conditions of the power grid.**

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

(a) Construction

As with the Project, Flexibility Option construction equipment would comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, the USEPA and NHSTA have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.[100] USEPA and NHTSA also adopted the Phase

[96] *BP Global, Oil reserves, 2018.*
[97] *Calculated as follows: 2,058,131 kWh / 4,380 hours = 470 kW.*
[98] *LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*
[99] *Calculated as follows: 470 kW / 5,976,000 kW = 0.008 percent.*
[100] *California Energy Commission, Tracking Progress – Energy Efficiency Document, Last Updated: September 2018.*

2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[101] The energy modeling for trucks does not account for specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. As with the Project, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy under the Flexibility Option. **Therefore, construction of the Flexibility Option would comply with existing energy standards.**

(b) Operation

As with the Project, electricity and natural gas usage during Flexibility Option operations would be minimized through incorporation of applicable Title 24 standards, applicable CALGreen requirements, and the Los Angeles Green Building Code, in accordance with the applicable version of these standards at the time of building permit issuance. Furthermore, the Flexibility Option would also incorporate energy-conservation measures such as installing energy efficient appliances, and water conservation features, such as installing water-saving fixtures and implementing water-efficient landscaping techniques.

In addition, as with the Project, the Flexibility Option would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The Flexibility Option's future residents, visitors, and employees would utilize vehicles that comply with CAFE fuel economy standards and the Pavley standards, which are designed to result in more efficient use of transportation fuels. Transportation fuel efficiency would improve as these future Project residents, visitors, and employees replace their privately owned or leased older vehicle models with newer vehicle models that achieve greater fuel efficiency. The Flexibility Option's mixed-use design and its increase in density located on an infill site in close proximity to existing transit, including rail and bus lines, its proximity to existing off-site retail, restaurant, entertainment, commercial, and job destinations, and its walkable and bike-able environment support the conclusion that that the Flexibility Option has been properly designed and located so that its development would achieve a reduction in VMT

[101] *BP Global, Oil Reserves, 2018.*

compared to a project with the same land uses that does not have the location-specific nor the Flexibility Option design-specific benefits nor the infill nature of the Flexibility Option. **Thus, as with the Project, construction and operation of the Flexibility Option would comply with existing energy standards.**

(v) Effects of the project on energy resources

As discussed for the Project, 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 2017 Power Strategic Long-Term Resource Plan identifies adequate resources (natural gas, coal) to support future generation capacity, and, as discussed above, LADWP's existing and planned electricity capacity and supplies would be sufficient to serve the Project's electricity demand.[102] The same mix of non-renewable and renewable sources of electrical generation procured by LADWP that would serve the Project would serve the Flexibility Option. LADWP has committed to providing an increasing percentage of its energy portfolio from renewable sources so as to exceed the Renewables Portfolio Standard requirements, by increasing to 50 percent by 2025 (5 years before the 2030 requirement), 55 percent by 2030, and 65 percent by 2036.[103] Furthermore, with the passage of SB 100, LADWP will be required to update its long-term plans to demonstrate compliance with the update requirements including providing 60 percent of its energy portfolio from renewable sources by December 31, 2030 and ultimately planning for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. As with the Project, the Flexibility Option would not conflict with LADWP's ability to procure renewable sources of energy required by SB 350.

In addition, as discussed for the Project, natural gas supplied to the Southern California area is mainly sourced from out-of-state with a small portion originating in California and the United States currently has approximately 90 years of natural gas reserves based on 2018 consumption.[104] Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years.[105] Therefore, as with the Project, the Flexibility Option would have a negligible effect on natural gas supply.

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[102] *"The 2017 [Power Strategic Long-Term Resource Plan] outlines an aggressive strategy for LADWP to accomplish its goals, comply with regulatory mandates, and provide sufficient resources over the next 20 years given the information presently available." Source: LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2016, page ES-25.*

[103] *LADWP, 2017 Power Strategic Long-Term Resource Plan, December, 2016, page ES-3.*

[104] *U.S. Energy Information Administration, Frequently Asked Questions, How much natural gas does the United States have, and how long will it last?*

[105] *California Energy Commission, Tracking Progress – Energy Efficiency Document, Last Updated: September 2018.*

Furthermore, based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.[106] Therefore, as with the Project, the Flexibility Option would have a negligible effect on the transportation fuel supply.

As with the Project, the Flexibility Option would minimize construction and operational energy and transportation fuel demand to the extent feasible and would not substantially impact energy resources.

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

The 2016-2040 RTP/SCS presents the transportation vision for the region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. As discussed in **Sections IV.A, Air Quality**, **IV.D, Greenhouse Gas Emissions**, **IV.G, Land Use and Planning**, and **IV.K, Transportation**, of this Draft EIR, as for the Project, the Flexibility Option would be generally consistent with and would not conflict with the general land use designation, density, and building intensity outlined in the SCAG 2016-2040 RTP/SCS. Using data collected from local jurisdictions, including General Plans, SCAG categorized existing land uses into "land use types" and then classified sub-regions into one of three land use development categories: urban, compact, or standard. SCAG used each of these three categories to describe the conditions that exist and/or are likely to exist within each specific area of the region.[107] As shown in Exhibit 13 of the 2016-2040 RTP/SCS Background Documentation, SCAG categorized the area surrounding the Project Site as a compact walkable area, generally defined as an area of new growth on the urban edge or large-scale redevelopment well served by regional and local transit service.[108] The Flexibility Option would be located on the same Project Site as the Project and, accordingly, would be also consistent with and would not conflict with SCAG's land use types for the area. As with the Project, the Flexibility Option would encourage the use of alternative modes of transportation, which could result in a reduction in overall VMT of approximately 35 percent relative to a comparable project that has the same land uses and quantities as the Flexibility Option, but does not have the location-specific nor the Flexibility Option design-specific benefits nor the infill nature of the Flexibility Option that would lead to VMT and trip reductions.[109] Because it would be located on the same

[106] *BP Global, Oil reserves, 2018.*
[107] *Southern California Association of Governments, 2016-2040 RTP/SCS, April 2016, pages 20-21.*
[108] *Southern California Association of Governments, 2016-2040 RTP/SCS Background Documentation, April 2016, Exhibit 13 and page 42.*
[109] *Percent reduction was derived by comparing the annual VMT of the Flexibility Option without the CalEEMod operational mobile mitigation (5,934,893 annual VMT) to the annual VMT of the Flexibility*

Project Site as the Project, the Flexibility Option would be located in the same developed, active area the contains the same mix of existing industrial, commercial, office, and residential uses and would be served by the same transit.[110] As with the Project, the Flexibility Option would also provide bicycle storage areas for residents, visitors, and employees. Furthermore, the Flexibility Option would provide 10 percent of its provided parking spaces with chargers for electric vehicles and an additional 30 percent of its provided parking with conduit to accommodate installation of future chargers for electric vehicles, thereby further reducing consumption of petroleum-based fuels.

As discussed in the regulatory setting above, on September 3, 2020, SCAG approved and adopted the Connect SoCal 2020–2045 RTP/SCS. It should be noted that the circulation of the Notice of Preparation (NOP) for the Project was on February 23, 2018, which was prior to the adoption of the 2020-2045 RTP/SCS and, therefore, the analysis focuses on the Flexibility Option's consistency with the 2016-2040 RTP/SCS. However, as the 2020-2045 RTP/SCS encompasses and builds upon the previous RTP/SCS, many of the same goals and strategies are similar between the two plans. As demonstrated above, the Flexibility Option would be located in an area well-served by public transit provided by Metro, as well as is in proximity to several transit investment projects in planning and construction phases, including the Regional Connector and Gold Line Arts District station relocation, expansion of the West Santa Ana line into the Arts District, and recently added DASH stops by LADOT to improve service in the Arts District; the Flexibility Option is comprised of a mix of uses, including commercial uses and 159 live/work units, including eleven percent set aside for (approximately 18 live/work units) deed restricted Very Low Income households; and would create a pedestrian-friendly environment through an active and transparent ground-floor design and by providing a landscaped paseo connecting Mateo Street and Imperial Street. Furthermore, the integration of land uses on the Project Site would produce substantial reductions in auto mode share to and from the Project Site that would help the region accommodate growth and promote public transit ridership that minimizes GHG emission increases and reduces per capita emissions, and would therefore not conflict with the goals of the 2020-2045 RTP/SCS.

The California Air Pollution Control Officers Association (CAPCOA) has provided guidance on mitigating or reducing emissions from land use development projects within its guidance document titled *Quantifying Greenhouse Gas Mitigation Measures*, which

*Option with the CalEEMod operational mobile mitigation (3,857,680 VMT). Source: CalEEMod outputs prepared for the greenhouse gas analysis (see **Appendix E**).*

[110] *Specifically, the Project Site is served by Metro Local Lines 18, 53, 60, 62, 66 and Metro Rapid 720 and 760. Additionally, the Project Site is located approximately one mile south of the Metro Gold Line Little Tokyo/Arts District Station.*

provides emission reduction values for recommended GHG reduction strategies.[111] As with the Project, the Flexibility Option would introduce additional density and uses in the Central City North area within walking and biking distance to offsite uses and within close proximity to transit. Therefore, the Flexibility Option would also be consistent with VMT reduction land use strategies identified by CAPCOA, which include Increased Density (LUT-1), Increased Location Efficiency (LUT-2), Increased Diversity of Urban and Suburban Developments (Mixed-Use) (LUT-3), Increased Destination Accessibility (LUT-4), Increased Transit Accessibility (LUT-5), Integrate Affordable and Below Market Rate Housing (LUT-6), and Improve Design of Development (LUT-9); as well as with the VMT reduction neighborhood/site design strategy to Provide Pedestrian Network Improvements (SDT-1) (refer to the detailed VMT analysis provided in **Section IV.D, Greenhouse Gas Emissions**, and the Traffic Report included as **Appendix L.1** of this Draft EIR.

As with the Project, operation of the Flexibility Option would encourage reduced transportation energy and provide residents, employees, and visitors with multiple convenient alternative transportation options. **Therefore, the Flexibility Option would encourage the use of efficient transportation energy use and efficient transportation alternatives.**

(vii) 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 the Title 24 standards and portions of the CALGreen Code that have been adopted in LAMC Chapter 9, Article 9 (Green Building Code), and is considered to be more stringent that state requirements. As with the Project, the Flexibility Option would minimize water demand and associated energy needed for water conveyance by including the installation of low-flow and high efficiency showerheads, toilets, and urinals; landscaping consisting of native and drought-tolerant plants; and water efficient irrigation. The HVAC system would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain.

In addition, as with the Project, the Flexibility Option would represent an infill development and would result in increased density on the Project Site, would be located in a transportation efficient area, would result in increased land use diversity and mixed-uses on the Project Site by including different types of land uses near one another, would be located in an area that offers access to multiple existing nearby destinations including

[111] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, 2010.*

retail, grocery, restaurant, office, and residential uses as well as public transit stations and stops.[112] These land use characteristics and features would minimize VMT and are included in the transportation fuel demand for the Flexibility Option's mobile sources.

As with the Project, with implementation of these features along with complying with state and local energy efficiency standards, the Flexibility Option would exceed applicable energy conservation policies and regulations beyond identified in City requirements.

(viii) Whether the project conflicts with adopted energy conservation plans

(a) Electricity and Natural Gas

As discussed in **Section IV.C, Greenhouse Gas Emissions**, the City has published the Green New Deal (Sustainable City pLAn 2019) which outlines goals and actions by the City to reduce GHG emissions. To facilitate implementation of these goals, the City adopted the Green Building Code. As with the Project, the Flexibility Option would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the CALGreen Code and California's Building Energy Efficiency Standards, which have been incorporated into the City's Green Building Code and are a set of prescriptive standards establishing mandatory maximum energy consumption levels for buildings. The Flexibility Option would comply with Title 24 energy conservation standards for insulation, glazing, lighting, shading, and water and space heating systems in all new construction. Specifically, the Flexibility Option would include installation of energy efficient heating and cooling systems, appliances (e.g., Energy Star®), equipment, and control systems, low-flow water-use fixtures, and energy-efficient pumps and motors for waste and storm water conveyance, fire water, and domestic water, thereby reducing water consumption and water heating fuel (natural gas).

As with the Project, the Flexibility Option is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of electricity and natural gas resources.

(b) Petroleum-Based Fuels

California is currently working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations

[112] *Public transit service in the immediate Project study area is currently provided by the Los Angeles County Metropolitan Transit Authority (Metro). The bus lines include: Metro Local Lines 18, 53, 60, 62, 66 and Metro Rapid 720 and 760. Additionally, the Project Site is located approximately one mile south of the Metro Gold Line Little Tokyo/Arts District Station.*

to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce VMT. Overall, gasoline consumption in California has declined and the CEC predicts that the demand for gasoline will continue to decline over the next ten years. Eventually, there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity. As discussed above and for the same reasons as with the Project, the Flexibility Option would be consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*. Specifically, the Flexibility Option would: increase the job and resident density of the Project Site (LUT-1); increase the diversity of the Project Site's land use (LUT-3); locate uses in proximity to transit (LUT-5); include design elements to maximize walkability and accessibility (LUT-9); provide direct linkage to the existing pedestrian network (SDT-1); and include a TDM Program to reduce peak hour vehicular traffic (SDT-2).

The Flexibility Option would also be consistent with and not in conflict with regional planning strategies that address transportation fuel conservation. As discussed above, 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, encouraging the reduction of building energy use, and increasing use of renewable sources. The Flexibility Option's mixed-use design and its increase in density located on an infill site in proximity to transit, including rail and bus lines, its proximity to existing off-site retail, grocery, restaurant, office, and residential uses, and its walkable and bike-able environment would minimize the Flexibility Option's VMT and are included in the transportation fuel demand for the Flexibility Option's mobile sources. Such reductions in VMT would also be consistent with the goals of L.A.'s Green New Deal (Sustainable City pLAn 2019), which, while not an adopted regulatory plan, accelerates GHG reduction targets through milestones and initiatives designed to increase housing built in close proximity to transit as well as reduce per capita VMT, including through reductions and eventual elimination of solid waste generation.

As with the Project, the Flexibility Option is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of transportation fuel resources.

Threshold a) Conclusion – Flexibility Option

As demonstrated by the analyses of the eight *State CEQA Guidelines* Appendix F criteria discussed above, as with the Project, the Flexibility Option would not result in a wasteful, inefficient, or unnecessary consumption of energy during construction or operation. The

Flexibility Option's energy requirements would not substantially affect local or regional supplies or capacity. The Flexibility Option's energy usage during peak and base periods would also not conflict with electricity, natural gas, and transportation fuel 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 Flexibility Option-related construction and operations. During operations, the Flexibility Option would comply with and exceed existing minimum energy efficiency requirements such as the Title 24 standards and CALGreen Code, in accordance with the applicable version of these standards at the time of building permit issuance. In summary, as with the Project, the Flexibility Option's energy demands would not substantially affect available energy supplies and would comply with existing energy efficiency standards. **Therefore, Flexibility Option impacts related to wasteful, inefficient, and unnecessary consumption of energy would be less than significant during construction and operation.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts related to wasteful, inefficient, and unnecessary consumption of energy would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts related to wasteful, inefficient, and unnecessary consumption of energy would be less than significant without mitigation.

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

Because the Flexibility Option would incorporate the same energy-efficient design, features, and proposed uses as the Project and would be subject to the same energy efficiency policies and plans as the Project, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

(1) Impact Analysis

As discussed above, the energy conservation policies and plans relevant to the Project include the California Title 24 energy standards, the CALGreen building code, and the City of Los Angeles Green Building Code. As these conservation policies are mandatory under the City of Los Angeles Building Code, the Project would not conflict with applicable plans for renewable energy or energy efficiency. In addition, the Project would implement measures to exceed Title 24 energy efficiency requirements. In addition to the above

required policies, the Project's energy consumption reduction features would also be consistent with L.A.'s Green New Deal (Sustainable City pLAn 2019), which, while not an adopted regulatory plan, accelerates GHG reduction targets through energy-consumption-related milestones and initiatives designed to increase renewable energy and reduce water use. **Therefore, Project and Flexibility Option impacts related to potential conflict with a state or local plan for renewable energy or energy efficiency would be less than significant during construction and operation.**

(2) Mitigation Measures

Under both the Project and the Flexibility Option, impacts to state or local plans for renewable energy standards would be less than significant; no mitigation would be required.

(3) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, impacts to state or local plans for renewable energy standards would be less than significant without mitigation.

4. Cumulative Impacts

As identified in **Section III, Environmental Setting**, of this Draft EIR, a total of 20 Related Projects are located in the vicinity of the Project Site. A map of the Related Project locations is provided in **Figure III-4** in **Section III** of this Draft EIR.

a) Impact Analysis

The geographic context for the cumulative impact analysis related to electricity and natural gas is the service areas of LADWP and SoCalGas, respectively. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project/Flexibility Option in the context of Countywide and regional consumption. The Project/Flexibility Option in conjunction with forecasted growth in these geographies would cumulatively increase the consumption of electricity, natural gas, and transportation energy.

(1) Wasteful, Inefficient, and Unnecessary Use of Energy

Numerical differences exist for this threshold because of the differences in project parameters between the Project and Flexibility Option, therefore this analysis is presented separately.

(a) Project

(i) 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. LADWP forecasts that its total energy sales in the 2023-2024 fiscal year (i.e., the Project's buildout year) will be 23,033 GWh of electricity.[113] As previously indicated, the Project-related net increase in annual electricity consumption of 1,863,199 kWh per year would represent approximately 0.008 percent of LADWP's projected sales in 2023, and in general, each Related Project would be expected to comprise a similarly limited percentage of overall electricity consumption. As with the Project, Related Projects would be required to evaluate energy impacts during construction and operation related to the wasteful, inefficient, or unnecessary use of electricity, incorporate energy conservation features, comply with applicable regulations including the City's Green Building Code, the Title 24 standards, and CALGreen, and incorporate mitigation measures, as necessary under CEQA.

LADWP relies on multiple forms of data from various agencies, including historical sales from the General Accountings Consumption and Earnings report, historical Los Angeles County employment data provided from the State Economic Development Division, plug-in electric vehicle projections from the CEC account building permits when determining electricity Load Forecasts, solar rooftop installations from the Solar Energy Development Group, electricity price projections from the Financial Services organization, and LADWP program efficiency forecasts.[114] In addition, LADWP considers projected Los Angeles County building permit amounts calculated by the UCLA Anderson School of Management when determining its load forecast and would therefore account for the Project's and the Related Projects' electricity demand within its forecasts.[115] Data used to develop the LADWP demand forecasts account for population growth, energy efficiency improvements, and economic growth which includes construction projects.[116] Therefore, electricity usage resulting from future operations at many of the Related Projects is accounted for in the LADWP projections.

Additionally, as discussed above, LADWP is required to procure at least 33 percent of its energy portfolio from renewable sources by 2020 and is committed to meeting the

[113] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter. LADWP, 2017 Power Strategic Long-Term Resource Plan, December 2017, Appendix A, Table A-1, p. A-6.*

[114] *Los Angeles Department of Water and Power, 2017 Power Strategic Long-Term Resource Plan, 2017, p. 70.*

[115] *Los Angeles Department of Water and Power, 2017 Power Strategic Long-Term Resource Plan, 2017, p. 67.*

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

requirement of the RPS Enforcement Program to use at least 50 percent of the state's energy from renewables by 2030. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources accounted for 32 percent of LADWP's overall energy mix in 2018, the most recent year for which data are available. This represents the available off-site renewable sources of energy that could meet the Project's and related projects energy demand. Furthermore, LADWP is on track to meet 65 percent or more energy from renewable sources by 2036 through the commission of large-scale solar projects (Moapa Southern Paiute Solar, Copper Mountain 3 Solar), expansion of customer-owned rooftop and ground-mounted solar projects, and construction of a new geothermal project in Imperial County.[117]

(ii) 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 2,480 million cf per day in 2023.[118] As previously indicated, the Project's natural gas demand of 14,107 cf per day would account for approximately 0.0006 percent of the 2023 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. As with the Project, Related Projects would be required to evaluate energy impacts during construction and operation related to the wasteful, inefficient, or unnecessary use of natural gas, incorporate energy conservation features, comply with applicable regulations including the City's Green Building Code, the Title 24 standards, and CALGreen code, and incorporate mitigation measures, as necessary under CEQA. Related Projects, as with the Project, would also be required to evaluate potential impacts related to local and regional supplies or capacity based on regional growth plans, such as the 2016-2040 RTP/SCS, and SoCalGas energy supply projections for long-term planning.

SoCalGas' forecasts account for projected population growth and development based on local and regional plans. Therefore, natural gas usage resulting from future operations at future development sites, including the Related Projects, is accounted for in the SoCalGas projections.

[117] *City of Los Angeles, Department of Water and Power, News Releases, LADWP Achieves 25 Percent Renewable Energy Milestone, March 23, 2017.*

[118] *California Gas and Electric Utilities, 2018 California Gas Report, p. 102-103.*

(iii) Transportation-Related 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 net petroleum-based fuel usage would be approximately 106,411 gallons of gasoline and 10,328 gallons of diesel per year. For comparison purposes, the net fuel usage during Project operation would represent approximately 0.003 percent of the 2023 (i.e., the Project's buildout year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County, as projected by CARB's EMFAC on-road vehicle emissions factor model.[119] While it is speculative to assess transportation fuel usage from Related Projects, in general, each Related Project would be expected to comprise a similarly limited percentage of Countywide fuel consumption. Furthermore, the Project would be consistent with the policies set forth in the 2016–2040 RTP/SCS. 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 with the Project, Related Projects would be required under CEQA to evaluate if their respective developments would conflict with the energy efficiency policies emphasized by the 2016-2040 RTP/SCS, such as the per capita VMT targets, promotion of alternative forms of transportation, proximity to public transportation options, provisions for encouraging multi-modal and energy efficient transit such as by accommodating bicycle parking and EV chargers at or above regulatory requirements.

By its very nature, the 2016–2040 RTP/SCS is a regional planning tool that addresses cumulative growth and resulting environmental effects. Therefore, growth and related transportation-related energy consumption resulting from future operations at many of the Related Projects is accounted for in SCAG's regional planning projections.

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, all of which serve to reduce reliance on petroleum fuels. According to the CEC, gasoline consumption has

[119] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Project's buildout year).*

declined by 6 percent since 2008, and the CEC predicts that the demand for gasoline will continue to decline over the next 10 years, with a corresponding increase in the use of alternative fuels, such as natural gas, biofuels, and electricity.[120] As with the Project, other Related Projects would be expected to reduce VMT by encouraging the use of alternative modes of transportation and other design features that promote VMT reductions.

(iv) Conclusion

Based on the analysis provided above, the Project's impacts related to the wasteful, inefficient, or unnecessary consumption of energy (i.e., electricity, natural gas, and transportation energy) would not be cumulatively considerable during construction or operation. **As such, the Project would not result in a cumulatively considerable contribution to a significant impact related to wasteful, inefficient, or unnecessary use of energy.**

(b) Increased Commercial Flexibility Option

(i) Electricity

As previously indicated, the Flexibility Option-related net increase in annual electricity consumption of 2,058,131 kWh would represent approximately 0.009 percent of LADWP's projected sales in 2023, and in general, each Related Project would be expected to comprise a similarly limited percentage of overall electricity consumption. As with the Flexibility Option, Related Projects would be required to evaluate energy impacts during construction and operation related to the wasteful, inefficient, or unnecessary use of electricity, incorporate energy conservation features, comply with applicable regulations including the City's Green Building Code, the Title 24 standards, and CALGreen, and incorporate mitigation measures, as necessary under CEQA.

As detailed above for the Project, LADWP relies on multiple forms of data from various agencies and considers projected Los Angeles County building permit amounts calculated by the UCLA Anderson School of Management when determining its load forecast and would therefore account for the Flexibility Option's and the Related Projects' electricity demand within its forecasts.[121] Data used to develop the LADWP demand forecasts account for population growth, energy efficiency improvements, and economic growth which includes construction projects.[122] Therefore, electricity usage resulting from

[120] *California Energy Commission, 2015 Integrated Energy Policy Report, docketed June 29, 2016, p. 113.*
[121] *Los Angeles Department of Water and Power, 2017 Power Strategic Long-Term Resource Plan, 2017, p. 67.*
[122] *City of Los Angeles Department of Water and Power, 2016 Retail Electric Sales and Demand Forecast, June 30, 2016.*

future operations at many of the Related Projects is accounted for in the LADWP projections.

Additionally, as discussed above, LADWP is required to procure at least 33 percent of its energy portfolio from renewable sources by 2020 and is committed to meeting the requirement of the RPS Enforcement Program to use at least 50 percent of the state's energy from renewables by 2030. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources, which accounted for 30 percent of LADWP's overall energy mix in 2017, the most recent year for which data are available. This represents the available off-site renewable sources of energy that could meet the Flexibility Option's and Related Projects' energy demand. Furthermore, LADWP is on track to meet 65 percent or more energy from renewable sources by 2036 through the commission of large-scale solar projects (Moapa Southern Paiute Solar, Copper Mountain 3 Solar), expansion of customer-owned rooftop and ground-mounted solar projects, and construction of a new geothermal project in Imperial County.[123]

(ii) Natural Gas

As previously indicated, the Flexibility Option's natural gas demand of 13,954 cf per day would account for approximately 0.0006 percent of the 2023 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. As with the Flexibility Option, Related Projects would be required to evaluate energy impacts during construction and operation related to the wasteful, inefficient or unnecessary use of natural gas, incorporate energy conservation features, comply with applicable regulations including the City's Green Building Code, the Title 24 standards and CALGreen code, and incorporate mitigation measures, as necessary under CEQA. Related Projects, as with the Flexibility Option, would also be required to evaluate potential impacts related to local and regional supplies or capacity based on regional growth plans, such as the 2016-2040 RTP/SCS, and SoCalGas energy supply projections for long-term planning.

SoCalGas' forecasts account for 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 accounted for in the SoCalGas projections.

(iii) Transportation-Related Energy

At buildout, the Flexibility Option's estimated net petroleum-based fuel usage would be approximately 106,534 gallons of gasoline per year, and 10,341 gallons of diesel per year.

[123] *City of Los Angeles, Department of Water and Power, News Releases, LADWP Achieves 25 Percent Renewable Energy Milestone, March 23, 2017.*

For comparison purposes, the net fuel usage during Project operation would represent approximately 0.003 percent of the 2023 (i.e., the Flexibility Option buildout year) annual on-road gasoline-related energy consumption and 0.002 percent of the 2023 annual diesel fuel-related energy consumption in Los Angeles County.[124] While it is speculative to assess transportation fuel usage from Related Projects, in general, each Related Project would be expected to comprise a similarly limited percentage of Countywide fuel consumption. Furthermore, the Flexibility Option would be consistent with the policies set forth in the 2016–2040 RTP/SCS. Related Projects in the 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 with the Flexibility Option, Related Projects would be required under CEQA to evaluate if their respective developments would conflict with the energy efficiency policies emphasized by the 2016-2040 RTP/SCS, such as the per capita VMT targets, promotion of alternative forms of transportation, proximity to public transportation options, provisions for encouraging multi-modal and energy efficient transit such as by accommodating bicycle parking and EV chargers at or above regulatory requirements.

By its very nature, the 2016–2040 RTP/SCS is a regional planning tool that addresses cumulative growth and resulting environmental effects. Therefore, growth and related transportation-related energy consumption resulting from future operations at many of the Related Projects is accounted for in SCAG's regional planning projections.

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, all of which serve to 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, with a corresponding increase in the use of alternative fuels, such as natural gas, biofuels, and electricity.[125] As with the Flexibility Option, other Related Projects would be expected to reduce VMT by encouraging the use of alternative modes of transportation and other design features that promote VMT reductions.

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[124] *California Air Resources Board, EMFAC2017 on-road vehicle emissions factor model, EMFAC2017 (Modeling input: Los Angeles County; Fleet Aggregate; Annual; 2023). The modeling input values are considered generally representative of conditions for the region and representative of the majority of vehicles associated with Project-related VMT. According to EMFAC2017 modeling, Los Angeles County on-road vehicles will consume 3.67 billion gallons of gasoline and 635 million gallons of diesel in 2023 (i.e., the Flexibility Option's buildout year).*

[125] *California Energy Commission, 2015 Integrated Energy Policy Report, docketed June 29, 2016, p. 113.*

(iv) Conclusion

Based on the analysis provided above, the Flexibility Option's impacts related to the wasteful, inefficient, or unnecessary consumption of energy (i.e., electricity, natural gas, and transportation energy) would not be cumulatively considerable during construction or operation. **As such, the Flexibility Option would not result in a cumulatively considerable contribution to a significant impact related to wasteful, inefficient, or unnecessary use of energy.**

(2) Consistency with State or Local Energy Plans

Because the Flexibility Option would incorporate the same energy-efficient design, features, and proposed uses as the Project and would be subject to the same energy efficiency policies and plans as the Project, the conclusions regarding the impact analysis and impact significance determination presented below for the Project would be the same under the Flexibility Option.

Related Projects within the Project area would be required to comply with energy conservation and renewable energy plans and polices described above, including Title 24, CALGreen, and the City's Green Building Code. Each of the Related Projects would be reviewed by the local utility providers to identify necessary electricity and natural gas service connections to meet the needs of their respective uses. Related Project applicants would be required to provide for the needs of their individual projects, thereby contributing to the electrical and natural gas infrastructure in the Project area. Related Projects would also be required to evaluate electricity and natural gas demands and coordinate with the local utility providers for providing adequate service, in accordance with future projected supplies, to each of the Related Project sites. Furthermore, the Related Projects are generally infill projects in a developed area already served by existing facilities and are generally residential, mixed-use, and commercial projects and not high-energy demand facilities such as heavy industrial uses. As Related Projects would be required to meet the same energy consumption standards, there would be no significant cumulative impacts with regard to consistency with energy conservation plans.

Furthermore, as described above, the Project would be consistent with the policies emphasized by the 2016-2040 RTP/SCS. The Project would be a mixed-use Project and located near public transit which would result in a VMT reduction. As discussed above and in **Section IV.D, Greenhouse Gas Emissions**, of this Draft EIR, the Project would result in a VMT reduction in comparison to a standard project relative to a comparable project that has the same land uses and quantities as the Project, but does not have the location-specific nor the Project design-specific benefits nor the infill nature of the Project, which would be consistent with the VMT reduction goals of the 2016-2040 RTP/SCS. 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, consistent with regional planning for cumulative development. **Therefore, as with the Project and the Flexibility Option, Related Projects would also be consistent with adopted plans for energy efficiency and cumulative impacts would be less than significant.**

b) Mitigation Measures

Under both the Project and the Flexibility Option, cumulative impacts to energy would be less than significant; no mitigation would be required.

c) Level of Significance After Mitigation

Under both the Project and the Flexibility Option, cumulative impacts to energy would be less than significant without mitigation.

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