



Appendix E

Energy Assessment

Energy Assessment
Morningside Project
Inglewood, California

Prepared by:



Expect More. Experience Better.

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1.0 INTRODUCTION

This report documents the results on the Energy Assessment to evaluate potential short- and long-term energy consumption impacts of the Morningside Residential Project (Project). The assessment evaluates the potential construction and operational energy consumption associated with the Project and determines the level of impact the Project would have on the environment.

1.1 Project Location

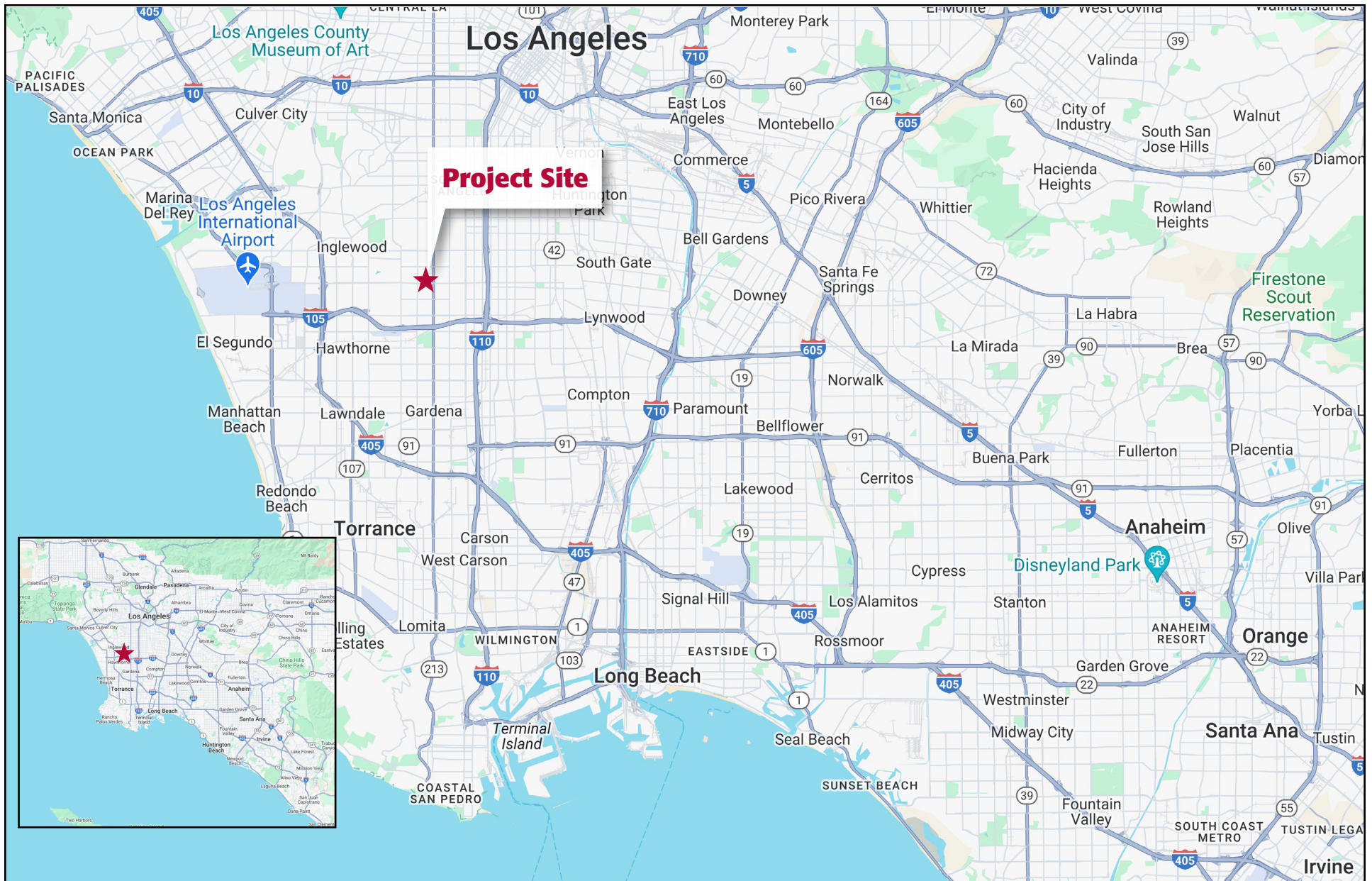
The Project Site is located south of the community of Morningside Park, in the southeastern portion of the City within Los Angeles County, California. As shown in [Figure 1: Regional Map](#) and [Figure 2: Project Site](#), the Project Site is located south of West 104th Street between Yukon Avenue and South 10th Avenue. The Project Site is served by a network of regional transportation facilities connecting to the larger metropolitan area. Primary regional access is provided by Interstate 105 (I-105), which runs east-west and is located approximately 0.9-mile south of the Project Site, by Interstate 405 (I-405), which runs north-south and is located approximately 1.8 miles west of the Project Site, and by Interstate 110 (I-110), which runs north-south and is located approximately 2.7 miles east of the Project Site. Major arterials serving the vicinity of the Project Site include West Century Boulevard, Crenshaw Boulevard, and Imperial Highway.

The Project Site is located within a suburban residential neighborhood comprised of single-family (one- and two-story) homes to the west and south, multi-family uses, and commercial uses including a Costco to the north, and educational facilities including Morningside High School to the west and Woodworth-Monroe TK-8 Academy to the southeast. The Inglewood Unified School District (IUSD) - Child Development Center also located to the southeast is planned to be rebuilt to the east of the Project Site at the Southwest corner of 104th Street and 10th Avenue. The Hollywood Park Specific Plan area, including SoFi Stadium is located approximately 0.25-mile to the north of the Project Site. Additionally, the Inglewood Basketball and Entertainment Center (IBEC) Project would be located 0.25-mile to the northeast of the Project Site, once construction is complete in 2024.

The Project Site is also located approximately 2.5 miles east of the Los Angeles International Airport (LAX) and approximately 1.0 mile north of the Hawthorne Municipal Airport. Nearby transit access lines include Metro Line 117, which travels along Century Boulevard connecting Inglewood to LAX, Westchester, Vermont, Watts and Norwalk, and Metro Line 210, which travels along Crenshaw Boulevard, connecting Inglewood to the Redondo Beach Transit Center, Downtown LA, Mid-City and Hollywood. Other bus lines serving the Project Site near Yukon Boulevard include the Los Angeles County Lennox Shuttle, providing service from Lennox, Inglewood, Centinela Hospital, County offices, parks, public schools, libraries, and shopping centers. The Project Site is located within one-quarter mile of 2 transit stops both with 15-minute intervals during peak travel periods.

1.2 Project Description

The Project proposes construction of 571 townhome units, of which 10 percent would be affordable for Very Low Income households. To serve residents and guests, the Project would provide approximately 375,622 sf of open space, including 20,799 sf of private open space and 354,823 sf of common open space. The common open space would include landscaped common areas, landscaped areas between buildings, a dog park, two pocket parks, and two club houses featuring workout rooms, restrooms, flex space, recreational swimming pools, open space, office areas, and lounging areas. The dog and pocket parks would include seating areas, with the pocket parks also featuring playground equipment. Private open space would include front porches and patios/ balconies. [Figure 3: Site Plan](#) displays the Project components.



SOURCE: Google Maps, 2024



FIGURE 1: Regional Map

INGLEWOOD MORNINGSIDE PROJECT



SOURCE: Nearmap, 2024



FIGURE 2: Project Site

INGLEWOOD MORNINGSIDE PROJECT



SOURCE: Danielian Associates, 2024



FIGURE 3: Site Plan

INGLEWOOD MORNINGSIDE PROJECT



2.0 ENVIRONMENTAL SETTING

2.1 Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100 to require Environmental Impact Reports (EIRs) to consider the consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. CEQA Guidelines Section 15126.2(b) requires mitigation for “significant environmental effects due to wasteful, inefficient, or unnecessary” energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This report has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

2.2 Energy Consumption

Energy consumption is analyzed in this technical assessment due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both construction and long-term operational phases.

Electrical Service. Southern California Edison (SCE) provides electrical services to the City of Inglewood (City) through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California’s electrical system has become more reliant on renewable energy sources; including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services. Southern California Gas Company (SoCalGas) provides natural gas services to the City of Inglewood and Los Angeles County (County). Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth’s surface and primarily composed of methane (CH₄). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California’s natural gas-fired electric generation increased by 2 percent in 2021, accounting for 50 percent of in-state generation.¹

¹ California Energy Commission, *2021 Total System Electric Generation*, <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation>, accessed June 2024.

Energy Usage. Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 6,822.4 trillion BTUs in 2022 (the most recent year for which this specific data is available).² Of California's total energy usage, the breakdown by sector is 43 percent transportation, 22 percent industrial, 17 percent commercial, and 18 percent residential.³ Electricity and natural gas in California are generally consumed by stationary users such as residences, and commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2023, taxable gasoline sales (motor vehicles) in California accounted for 13,584,697,639 gallons of gasoline.⁴

The electricity consumption attributable to the County from 2012 to 2022 is shown in [Table 1: Electricity Consumption in Los Angeles County 2012-2022](#). As indicated in [Table 1](#), energy consumption in the County steadily increased between 2012 to 2014 then began to decline in 2015-2020 with the exception of 2018 then again increased in 2021 and 2022.

Year	Electricity Consumption (in millions of kilowatt hours)
2012	69,167.61
2013	69,859.23
2014	69,859.61
2015	69,460.61
2016	69,364.52
2017	66,591.44
2018	67,734.12
2019	66,741.97
2020	65,566.25
2021	66,003.28
2022	68,484.95

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed June 2024.

The natural gas consumption attributable to the County from 2012 to 2022 is shown in [Table 2: Natural Gas Consumption in Los Angeles County 2012-2022](#). Natural gas consumption is expressed in units of Therms, a unit of heat energy that is equal to 100,000 BTUs. Natural gas consumption in the County fluctuated with increases and decreases occurring annually.

² U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2020*, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed June 2024.

³ U.S. Energy Information Administration, *California State Profile and Energy Estimates, California Energy Consumption by End-Use Sector, 2022*, <https://www.eia.gov/state/?sid=CA#tabs-2>, accessed July 2024.

⁴ California Department of Tax and Fee Administration, *January 2022 – Motor Vehicle Fuel 10 Year Reports*, <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>, accessed June 2024.

Table 2: Natural Gas Consumption in Los Angeles County 2012-2022

Year	Natural Gas Consumption (in millions of therms)
2012	2,985.14
2013	3,065.43
2014	2,793.87
2015	2,761.04
2016	2,877.85
2017	2,956.03
2018	2,921.50
2019	3,048.32
2020	2,936.68
2021	2,882.76
2022	2,820.28

Source: California Energy Commission, *Natural Gas Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed June 2024.

3.0 REGULATORY SETTING

3.1 State of California

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020. The 2022 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2023.

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2022 and went into effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 CALGreen Code.⁵

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The State Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the State's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from

⁵ California Energy Commission, *2022 Building Energy Efficiency Standards*, <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>, accessed July 2024.

eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

3.2 City of Inglewood

City of Inglewood Energy and Climate Action Plan

The following are relevant policies of the Inglewood Energy and Climate Action Plan, which may contribute to reducing potential energy impacts. The City's ECAP provides six strategies to reduce both energy and greenhouse gas (GHG) emissions. These strategies are accompanied by programs and actions to reduce energy and GHG consumption while achieving the City's goals of energy and greenhouse gas reduction by 2025. These strategies and actions are to be implemented by the City as they have the resources and authority to enact these changes. The following are the strategies that the City is to implement.

- **Strategy 1: Lead by Example-** The City of Inglewood would take steps to lead the initiative of energy and GHG reduction through water conservation and vehicle replacement.
- **Strategy 2: Increase Energy Efficiency** - This strategy is for both residential and non-residential to increase energy efficiency in homes and businesses.
- **Strategy 3: Support Renewable Energy Generation-** The City would help businesses and residents to become energy efficient by moving barriers and educating community members.
- **Strategy 4: Improve Transportation Options** -The transportation strategy will be carried out by the City to reduce VMT through the implementation of different measures.
- **Strategy 5: Reduce Water Consumption and Waste-** This strategy encourages the City and community members to participate in water conservation, recycling, and local food actions.
- **Strategy 6: Adapt to the Potential Impacts of Climate Change-** The City will take action to prevent potential consequences of climate change. This strategy does overlap with mitigation measures the City has already taken to reduce GHG emissions.

4.0 SIGNIFICANCE CRITERIA AND METHODOLOGY

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This assessment focuses on these effects with regards to energy and suggests mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the Project. According to State CEQA Guidelines Appendix G, the proposed Project would have a significant impact related to energy, if it would:

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

The impact analysis focuses on the three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips associated with the Project as well as the fuel necessary for Project construction. The analysis of the Project's electricity and natural gas use is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use for occupancy. The results of CalEEMod are included in the Project's Air Quality Assessment, prepared by Kimley-Horn (July 2024). Modeling related to Project energy use was based primarily on the default settings in CalEEMod and Project-specific features such as number of units and building square footage. The amount of operational fuel use was estimated using CalEEMod outputs for the Project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in Los Angeles County. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

5.0 POTENTIAL IMPACTS AND MITIGATION

Threshold 5.1 Would the Project result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Threshold 5.2 Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Construction

The Project is anticipated to be constructed in six phases: site-wide horizontal construction (including site preparation, grading, infrastructure improvements, and paving) and five phases of townhome construction. Construction activity is anticipated to occur over a duration of approximately 4.5 years, beginning in May 2025. The energy associated with Project construction includes electricity use associated with water utilized for dust control, diesel fuel from on-road hauling trips, vendor trips, and off-road construction diesel equipment, as well as gasoline fuel from on-road worker commute trips. Because construction activities typically do not require natural gas, it is not included in the following discussion. There are no aspects of the Project that would foreseeably result in the inefficient, wasteful, or unnecessary use of energy during construction activities. The methodology for each category is discussed below. Quantifications of construction energy are provided by the Project below; see [Table 3: Energy Use During Construction](#).

Table 3: Energy Use During Construction			
Project Source	Total Construction Energy	Los Angeles County Annual Energy ^{1,2}	Percentage Increase Countywide
Electricity Use		kWh	
Water Use ³	5,496	68,484,956,280	0.00001%
Diesel Use		Gallons	
On-Road Construction Trips ⁴	48,500	532,570,627	0.0091%
Off-Road Construction Equipment ⁵	191,501		0.0360%
Construction Diesel Total	240,001		0.0451%
Gasoline		Gallons	
On-Road Construction Trips	129,348	3,536,229,368	0.0037%
Notes:			
1. County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov			
2. Total annual county fuel per EMFAC 2021 model of projected operational fuel usage in 2025 – first year of construction.			
3. Construction water use based on acres disturbed per day per construction sequencing and estimated water use per acre.			
4. On-road mobile fuel source based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 in Los Angeles County for 2025.			
5. Construction fuel use was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.			
Source: Refer to energy calculations in Appendix A: Energy Data.			

Electricity

Water for Construction Dust Control. Electricity use associated with water use for construction dust control is calculated based on total water use and the energy intensity for supply, distribution, and treatment of water. The total number of gallons of water used is calculated based on acreage disturbed during grading and site preparation, as well as the daily watering rate per acre disturbed.

- The total acres disturbed are calculated using the methodology described in Chapter 4.2 of Appendix C of the CalEEMod User's Guide.

- The water application rate of 3,020 gallons per acre per day is from the Air and Waste Management Association's Air Pollution Engineering Manual (1992).

The energy intensity value is based on the CalEEMod default energy intensity per gallon of water. As summarized in [Table 3](#), the total electricity demand associated with water use for the Project construction dust control would be approximately 5,496 kWh over the duration of construction. As indicated in [Table 3](#), Project construction electricity would represent approximately 0.00001 percent of the current electricity use in Los Angeles County. SCE's total energy sales are projected to be 111,670 GWh of electricity in 2025 (the first year of Project construction).⁶ The Project's construction-related net annual electricity consumption of 0.0055 GWh would represent less than one percent of SCE's projected sales. Therefore, it is anticipated that SCE's existing and planned electricity capacity and electricity supplies would be sufficient to serve the Project's temporary construction electricity demand and impacts would be less than significant.

Petroleum Fuel

On-Road Diesel Construction Trips. The diesel fuel associated with on-road construction mobile trips is calculated based on vehicle miles traveled (VMT) from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default diesel fleet percentage, and vehicle fuel efficiency in miles per gallon (MPG). VMT for the entire construction period is calculated based on the number of trips multiplied by the trip lengths for each phase shown in CalEEMod. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. Total diesel fuel consumption associated with on-road construction trips for the Project would be approximately 48,500 gallons (see [Table 3](#)).

Off-Road Diesel Construction Equipment. Similarly, the construction diesel fuel associated with the off-road construction equipment that is calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The total diesel fuel associated with the Project off-road construction equipment is approximately 191,501 gallons (see [Table 3](#)). Combined diesel usage from on-road and off-road construction sources is 240,001 gallons.

On-Road Gasoline Construction Trips. The gasoline fuel associated with on-road construction mobile trips is calculated based on VMT from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default gasoline fleet percentage, and vehicle fuel efficiency in MPG using the same methodology as the construction on-road trip diesel fuel calculation discussed above. The total gasoline fuel associated with Project on-road construction trips would be approximately 129,348 gallons (see [Table 3](#)).

Los Angeles County annual gasoline fuel use in 2025 is anticipated to be 3,536,229,368 gallons and diesel use would be approximately 532,570,627 gallons.⁷ Total Project construction gasoline fuel would represent approximately 0.0037 percent of annual gasoline used in the County, and total Project construction diesel fuel would also represent 0.0451 percent of annual diesel used in the County. Based on the total Project's relatively low construction fuel use proportional to annual County use, the Project would not substantially affect existing energy fuel supplies or resources. New capacity or additional sources of construction fuel are not anticipated 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, current crude oil production would

⁶ California Energy Commission, *CED 2022 LSE and BA planning Forecast Tables*, <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2022-integrated-energy-policy-report-update-2>.

⁷ Total annual county fuel per EMFAC 2021 model of projected operational fuel usage in 2025 – first year of construction

be sufficient to meet demand until 2050.⁸ As such, it is expected that existing and planned transportation fuel supplies would be sufficient to serve the Project's temporary construction demand.

Furthermore, there are no unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. In addition, some energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel use.

The Project would have construction activities that would use energy, primarily in the form of diesel fuel (e.g., mobile construction equipment, generator powering hand tools) and electricity (e.g., for water conveyance). Contractors would be required to monitor air quality emissions of construction activities using applicable regulatory guidance such as from SCAQMD CEQA Guidelines. Additionally, construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel PM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. This requirement indirectly relates to construction energy conservation because when air pollutant emissions are reduced from monitoring and the efficient use of equipment and materials, energy use is reduced. There are no aspects of the Project that would foreseeably result in the inefficient, wasteful, or unnecessary use of energy during construction activities.

Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary use of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive and that there is a significant cost-savings potential in green building practices. Substantial reduction in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The Project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the costs of business.

As described above, the Project's fuel consumption and energy usage from the entire construction period would constitute less than one percent of total consumption in the County. It should be noted that the State CEQA Guideline Appendix G and Appendix F criteria require the Project's effects on local and regional energy supplies and on the requirements for additional capacity to be addressed. A less than one percent increase in temporary demand is not anticipated to trigger the need for additional capacity. Project construction would have a nominal effect on local and regional energy supplies. Additionally, use of construction fuel would be temporary and would cease once the Project is fully developed. As such, Project construction would have a nominal effect on the local and regional energy supplies.

As stated above, there are no unusual characteristics that necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, potential impacts are considered less than significant.

⁸ US Energy Information Administration. *California Energy Consumption Estimates*. Retrieved from EIA Website: <https://www.eia.gov/state/print.php?sid=CA>.

Operations

The energy consumption associated with Project operations would occur from building energy (electricity and natural gas) use, water use, and transportation-related fuel use. Annual energy use during Project operations is shown in [Table 4: Project Annual Energy Use During Operations](#). It is noted that the Project's unmitigated energy consumption estimates provided in [Table 4](#) do not include consideration of roof-top solar that would offset electrical demand from SCE, use of high efficiency lighting, or the use of efficient irrigation systems to provide a conservative impact analysis.

Table 4: Project Annual Energy Use During Operations			
Source	Annual Operational Energy	Los Angeles County Annual Energy ^{1,2}	Percentage Increase Countywide
Electricity Use³	kWh		
Electricity Demand	2,701,093		
Water Electricity	149,378		
Total Electricity (Electricity Demand + Water Conveyance)	2,850,472	68,484,956,280	0.0042%
Natural Gas Use	Therms		
Area ³	180,544	2,820,285,935	0.0064%
Diesel Use	Gallons		
Mobile ⁴	3,756	528,535,000	0.00071%
Gasoline Use	Gallons		
Mobile ⁴	592,035	3,171,276,372	0.01867%
1. Notes: 2. County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov 3. Total annual county fuel per EMFAC 2021 model of projected operational fuel usage in 2030 – Project buildout. 4. The electricity, natural gas, and water usage are based on Project-specific estimates and CalEEMod defaults. 5. Calculated based on the mobile source fuel based on vehicle miles traveled (VMT) and fleet-average fuel consumption (in gallons per mile) from EMFAC2021 for operational year 2030.			
Source: Refer to energy calculations in Appendix A .			

Petroleum Fuel

The gasoline and diesel fuel associated with on-road vehicular trips is calculated based on total VMT calculated for the analyses within the Project's Air Quality Assessment and average fuel efficiency from the EMFAC model. The EMFAC fuel efficiency data incorporates the Pavley Clean Car Standards and the Advanced Clean Cars Program.⁹ As summarized in [Table 4](#), the total gasoline and diesel fuel associated with on-road trips would be approximately 592,035 gallons per year and 3,756 gallons per year, respectively.

Los Angeles County's annual gasoline fuel use in 2030 is anticipated to be 3,171,276,372 gallons and diesel fuel is anticipated to be 528,535,000 gallons. Expected Project operational gasoline and diesel consumption would represent approximately 0.01867 percent of gasoline use and 0.00071 of diesel use in the County. Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world.

The Project's fuel consumption represents less than one percent of consumption within the County. Project operations would not substantially affect existing energy or fuel supplies or resources. The Project would

⁹ The CARB EMFAC 2017 Technical Documentation from March 2018 notes that emissions are estimated with all current controls active, except Low Carbon Fuel Standards (LCFS). The reason for excluding LCFS is that most of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS is assumed to not have a significant impact on CO2 emissions from EMFAC's tailpipe emission estimates.

comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant.

Electricity

The electricity use during the Project is based on CalEEMod defaults. The Project would use approximately 2,850,472 kWh of electricity per year (see Table 4). While the electricity associated with operational water use is estimated based on the annual water use and the energy intensity factor is the CalEEMod default energy intensity per gallon of water for Los Angeles County. Project area water use is based on the CalEEMod default rates. The Project would use approximately 22 million gallons of water annually which would require approximately 149,378 kWh per year for conveyance and treatment, which is 6 percent of the total Project electricity demand. Unmitigated Project electricity consumption would constitute approximately 0.0042 percent of countywide electricity use¹⁰; see Table 4. The Project's electricity consumption represents less than one percent of consumption within the County. Project operations would not substantially affect existing energy or fuel supplies or resources. The Project would comply with applicable energy standards and new capacity would not be required. In addition, the Project would include rooftop solar to offset the amount of electricity needed from SCE's grid. Impacts would be less than significant.

Natural Gas

The methodology used to calculate the natural gas use associated with the Project is based on CalEEMod default rates. Californians used 11,711 million therms of natural gas in 2022 and Los Angeles County used 2,820 million terms 2022.¹¹ The Project's operational natural gas use would constitute 0.0015 percent of natural gas use in the State and 0.0064 percent in the County. The Project's natural gas consumption represents less than one percent of consumption within the County. Project operations would not substantially affect existing energy or fuel supplies or resources. The Project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant.

Compliance with Energy Efficient Measures

As discussed above, California's Energy Efficiency Standards for Residential and Non-Residential Buildings create uniform building codes to reduce California's energy use and provide energy efficiency standards for residential and non-residential buildings. These standards are incorporated within the California Building Code and are expected to substantially reduce the growth in electricity and natural gas use. 2022 Title 24 standards for new residential and nonresidential buildings will focus on encouraging electric heat pump technology and use, promote electric-ready buildings to incentivize owners to use cleaner electric heating, cooking, and vehicle charging, expanding solar photovoltaic systems and battery storage systems to reduce reliance on fossil fuel power plants. The Project would include rooftop solar to offset the amount of electricity needed from SCE's grid and incorporate all required Title 24 measures.

Regarding water energy conservation, the Project would incorporate a variety of strategies for sustainability and water conservation based on state and local guidelines including compliance with the Model Water Efficient Landscape Ordinance (MWELO) and all additional local requirements. Plant species will be predominantly low and moderate water use specific to the local climate. Plants will be grouped in hydrozones based on similar water use demands and planting design with respond to specific site conditions. The irrigation system would include a variety of water conservation features including the use of a flow sensor at the point of connection that can detect possible leaks and shut the system down so system integrity can be ensured. The irrigation controller will incorporate Smart Water Application Technology (SWAT) that will allow it to automatically adjust run times based on local weather conditions. The controller would also utilize a rain shut off device. Shrubs and ground cover will be irrigated with drip tubing which reduces evaporation and eliminates

¹⁰ County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov

¹¹ California Energy Commission, Gas Consumption by County, ecdms.energy.ca.gov.

wasteful overspray and trees will receive supplemental water from high efficiency micro spray nozzles. The combination of these factors will ensure a sustainable landscape in the community that maximizes the use of limited water resources.

It should also be noted that SCE is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase total procurement from eligible renewable energy resources to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. The Project would be consistent with the strategies of the City's Energy and Climate Action Plan (ECAP) (Strategy 2: Increase Energy Efficiency, Strategy 3: Support Renewable Energy Generation, Strategy 4: Improve Transportation Options, Strategy 5: Reduce Consumption and Waste, and Strategy 6: Adapt to the Potential Impacts of Climate Change). The Project would be an infill development located near transit, and nearby residential, commercial, entertainment and service uses. The Project would be constructed in accordance with Title 24 of the California Building Standards Code – Energy Efficiency Standards as well as the appliance energy efficiency standards in Title 20 of the California Code of Regulations. All residential units will be EV capable and two on-site EV Charging stations would be provided at each of the clubhouse buildings. The Project would include solar panels, which would generate power to meet approximately 50 percent of the Project's energy demand and would incorporate a variety of strategies for sustainability and water conservation.

The Project's energy consumption would constitute less than one percent of the corresponding energy consumption projections within the County. Project operations would not substantially affect existing energy or fuel supplies or resources. All Project buildings will comply with energy and fuel efficiency laws and regulations; thus, the Project would not be wasteful, inefficient, or unnecessary. Therefore, the Project would result in a less than significant environmental impact in this regard.

Mitigation Measure: No mitigation is required.

Level of Significance: Less than significant impact.

Cumulative Impacts

Potential cumulative impacts to energy would result if the proposed Project, in combination with past, present, and future projects, would result in the wasteful, inefficient, or unnecessary use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation.

The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact.

Construction and operations associated with implementation of the Project would result in the use of energy, but not in an inefficient, unnecessary, or wasteful manner. The use of energy would not be substantial in comparison to statewide electricity, natural gas, gasoline, and diesel demand; refer to [Table 3](#) and [Table 4](#). As discussed above, the electricity used for construction would be less than that required during operation of the Project, would be temporary, and would have a minimal contribution to the Project's overall energy consumption. Construction of the Project would not typically involve the consumption of natural gas. The Project's construction electricity consumption would be negligible relative to SCE's generated electricity, and electricity supplies would be sufficient to serve the Project's temporary construction electricity demand.

SCE will 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 their service area and accounted for in the

planned growth of the power system if the electricity demand was to increase past what the PV panels can provide. It should be noted that SCE and SoCalGas consider planned development for their service areas and are in and of themselves providing for cumulative growth. Therefore, it is likely that cumulative growth associated with the related projects is already accounted for in the planning of future supplies to cover projected demand.

SCE and SoCalGas have policies, programs, and projects in place to provide continued, adequate energy to their users, including the proposed Project. Substantial reductions to the cumulative demand for energy can result from an increased reliance on renewable energy systems (as required by the State's Renewable Portfolio Standards) and the construction of energy-efficient buildings. Cumulative projects would be subject to applicable Title 24 and CALGreen requirements similar to the Project, which includes energy efficiency standards to minimize the wasteful and inefficient use of energy.

Furthermore, 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, current crude oil production would be sufficient to meet worldwide consumption demand until 2050. As such, it is expected that existing and planned transportation fuel supplies would be sufficient to serve the Project's construction and operational demand. New capacity or supplies of energy resources would not be required. Additionally, the Project would be subject to compliance with all federal, state, and local requirements for energy efficiency. State regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In consideration of cumulative energy use, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Additionally, as discussed above, the Project would increase overall electricity and natural gas demand but would not require additional facilities other than local connections to, or undergrounding of, existing facilities in the Project vicinity. Therefore, the proposed Project's incremental demand for electricity and natural gas facilities would not be cumulatively considerable. Thus, the Project would not contribute to a cumulative impact to the wasteful, unnecessary, or inefficient use of energy. A less than significant cumulative impact would occur.

The Project would also be required to comply with all the same applicable federal, state, and local measures aimed at reducing fossil fuel consumption and the conservation of energy. The anticipated Project impacts, in conjunction with cumulative development in the vicinity, would increase urbanization and result in increased energy use. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. As noted above, the Project would not result in significant impacts to state or local plans for renewable energy or energy efficiency. Therefore, the Project and identified cumulative projects are not anticipated to result in a significant cumulative impact. Therefore, potential impacts are considered less than significant.

6.0 REFERENCES

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Appendix A

Energy Data

Construction Fuel Consumption

On-Site Diesel ¹	MTCO ₂ e	Gallons of Fuel ⁴	Construction Year 2025 County Fuel	Percent
Demolition	22	2,161		
Site Preparation/Grading	282	27,608		
Infrastructure Improvements	201	19,695		
Paving	30	2,963		
Building Construction	1,399	137,060		
Architectural Coating	21	2,014		
Total	1,955	191,501	532,570,627	0.0360%

Off-Site Diesel ¹				
Demolition	4	439		
Site Preparation/Grading	90	8,859		
Infrastructure Improvements	167	16,363		
Paving	0	0		
Building Construction	233	22,839		
Architectural Coating	0	0		
Total	495	48,500	532,570,627	0.0091%

Off-Site Gasoline ²				
Demolition	1	153		
Site Preparation/Grading	12	1,328		
Infrastructure Improvements	457	52,017		
Paving	4	450		
Building Construction	630	71,791		
Architectural Coating	32	3,608		
Total	1,136	129,348	3,536,229,368	0.0037%

Total Diesel Fuel		240,001	532,570,627	0.0451%
Total Gasoline Fuel		129,348	3,536,229,368	0.0037%
Total Construction Fuel	3,586	369,349		

Construction Phase ³	Demolition			Site Preparation/Grading			Infrastructure Improvements		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
2025	22.06	4.48	1.35	281.88	90.45	11.66	60.02	50.45	138.24
2026							141.06	116.62	318.47
2027									
2028									
2029									
Total	22.06	4.48	1.35	281.88	90.45	11.66	201.09	167.06	456.71

Construction Phase ³	Paving			Building Construction			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gas (Worker)
2025									
2026	30.25		3.95	95.08	12.18	31.75			
2027				630.77	120.53	326.51	8.02		13.70
2028				591.89	92.27	249.31	7.60		13.67
2029				81.64	8.22	22.76	4.95		4.31
Total	30	0	4	1,399	233	630	21	0	32

Notes:

¹ Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

² Fuel used for worker trips assumed to be gasoline.

³ MTCO₂e rates from CalEEMod (3. Construction Details).

⁴ For CO₂e emissions, The Climate Registry, June 2023 Default Emission Factors, see Table 1.1 (U.S. Default Factors for Calculating CO₂ Emissions from Combustion of Transport Fuels) <https://theclimateregistry.org/wp-content/uploads/2023/06/2023-Default-Emission-Factors-Final-1.pdf>;

Climate Registry Conversion Ratios:

- Gasoline: 8.78 kg CO₂ per gallon / 1,000 kg per metric ton
- Diesel: 10.21 kg CO₂ per gallon / 1,000 kg per metric ton

Construction Water Energy

Daily Soil Disturbance ¹	4	acres
Days of Soil Disturbance ²	98	days
Water Concentration ³	3,020	gallons/acre
Water Energy Intensity ⁴	5,306	kWh/MG
Total Construction Water	1.04	million gallons
Construction Water Energy	5,496	kWh
	0.0055	GWh

Notes:

- ¹ Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Detail) and maximum SCAQMD LST values for soil-disturbing equipment.
- ² Number of days of construction (site prep and grading phases) with soil-disturbing equipment per CalEEMod (3.0 Construction Detail).
- ³ Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.
- ⁴ Water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343.

Operational Fuel

Vehicle Type	Percent ¹
Passenger Cars	0.94
Light/Medium Trucks	0.05
Heavy Trucks/Other	0.01
Total Trucks	
Total	1.00

Annual VMT ²	MPG ³	Annual Fuel (Gallons)	Fuel Type	Los Angeles Gallons (2030) ⁴	Los Angeles Percent	
14,682,473	24.8	592,035	Gas	3,171,276,372	0.01867%	0.00071%
46,977	18.1	2,595	Diesel	528,535,000	0.0005%	
8,471	7.3	1,160	Diesel	528,535,000	0.0002%	
930,432		3,756				

Total VMT (mitigated) 15,612,905

Phase 1	2,242,133
Phase 2	4,402,238
Phase 3	3,910,062
Phase 4	3,199,142
Phase 5	1,859,330

Fleet Mix -

Land Use		LDA	LDT1	LDT2	MCY	MDV	LHD1	LHD2	MHD	OBUS	UBUS	SBUS	MH	HHD
Condo/Townhouse		0.487471342	0.041651577	0.244081959	0.022301052	0.144900292	0.027416918	0.007118823	0.011103786	0.000835828	0.000650948	0.00061652	0.002746276	0.009104671

Notes:

- ¹ Percent of vehicle trip distribution based on fleet mix from CalEEMod
- ² Total annual operational VMT based on mitigated annual VMT from CalEEMod (5.9 Operational Mobile Sources).
- ³ Average fuel economy derived from US Energy Information Administration, Monthly Energy Review (Table 1.8), April 2024 (<https://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf>)
- ⁴ Total annual county fuel per EMFAC 2021 model of projected operational fuel usage in 2030 - first operational year of Project

Operational Water Energy

Indoor	21.8	million gallons
Indoor Energy Intensity Factor ¹	6,807	kWh/MG
Outdoor	0.2	million gallons
Outdoor Energy Intensity Factor ²	5,306	kWh/MG
Operational Water Energy	149,378	kWh

Phase	Indoor Water Use (gals)	Outdoor Water Use (gals)
1	3,305,149	49,672
2	6,001,082	50,932
3	5,330,153	48,483
4	4,599,204	49,183
5	2,534,618	25,760
Total	21,770,206	224,029

Notes:

¹ Indoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, distribution, and wastewater.

² Outdoor water energy intensity factor for county subarea per CalEEMod User Guide, Appendix D, page D-343. Factor includes supply, treatment, and distribution.

³ Operational water use values: CalEEMod 5.12

Electricity/Natural Gas Energy

	Unmitigated Project Annual Energy	Los Angeles County Annual Energy (2022) ²	Percent of County
Electricity (kWh/yr)	2,701,093	68,484,956,280	
Water Electricity (kWh/yr)	149,378	68,484,956,280	
Total Electricity (kWh/yr)	2,850,472	68,484,956,280	0.0042%
Natural Gas (kBTU/yr)	18,050,118		
Natural Gas (therms/yr)	180,544	2,820,285,935	0.0064%

Phase	Electricity (kwh/yr)	Natural Gas kBTU/yr
1	416,895	3,854,659
2	739,338	3,868,888
3	656,680	3,436,341
4	575,913	5,256,165
5	312,267	1,634,064

Notes:

¹ Energy use per CalEEMod (5.11.1).

² County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov.