3.5 Energy

This section describes the affected environment and regulatory setting for Energy related to the Project Area. In addition, this section describes the potential impacts related to Energy that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Energy during construction and operation of the proposed Project would be less than significant and no mitigation measures are required.

3.5.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Energy. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.5.1.1 State

California Environmental Quality Act

Appendix F of the California Environmental Quality Act (CEQA) stipulates that Environmental Impact Reports (EIR) include a discussion of the potential energy impacts of a proposed project, with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Sections 21083 and 21087, Public Resources Code). EIRs may include, but are not limited to, discussions of energy consuming equipment and processes used during construction and operation of a project; the energy intensiveness of materials and equipment required for the project; the effects of a project on local and regional energy supplies; and the degree to which a project complies with existing energy standards.

California Long-Term Energy Efficiency Strategic Plan

The California Public Utilities Commission adopted the California Long-Term Energy Efficiency Strategic Plan on September 18, 2008 (California Public Utilities Commission, 2008). The purpose of the strategic plan is to provide a roadmap for achieving maximum energy savings across all major sectors in California. The strategic plan identifies specific short- and long-term strategies to assist in achieving long-term vision goals for energy efficiency.

California Energy Commission

The California Energy Commission (CEC) was established by the Warren-Alquist Act in 1974 (California Energy Commission, 2014). Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 require the CEC to establish performance standards in the form of an "energy budget," which is determined based on the energy consumption per square foot of floor space. In 2014, the CEC developed a strategic plan that established goals for making energy public policy recommendations, collecting and providing energy data to policy makers, developing programs to promote energy investments and solutions, adopting building energy efficiency standards, developing energy-efficient transportation technology, and promoting renewable energy in California (California Energy Commission, 2014).

California Building Standards Code

The California Building Standards Code is contained in Title 24 of the California Code of Regulations (CCR). The code is comprised of building standards to address California's ever-changing conditions and particular concerns, including standards that have been adopted and adapted from national building codes. All occupancies in California are subject to the California Building Standards Code.

2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The 2019 Building Energy Efficiency Standards (or California Energy Code), contained in Title 24, Part 6, of the CCR, were adopted by the CEC in 1976 and are updated approximately every three years (California Energy Commission, 2018). These standards apply to all residential and non-residential buildings, with a few exceptions (hospitals, nursing homes, and jails), and apply to new and existing buildings. The California Energy Code regulates a building's "energy budget" for consuming hydro-carbon fuel and electricity. The California Energy Code also contains energy and water efficiency requirements for newly constructed buildings and alterations to existing buildings. In addition, the California Energy Code provides requirements for manufacturing, construction, and installation of building components.

California Green Building Standards Code

The California Green Building Standards Code (or CALGreen) is contained in Title 24, Part 11 of the CCR. The purpose of CALGreen is to improve public health and safety using building design and construction concepts that result in positive environmental impacts. CALGreen encourages sustainable construction practices in the following categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

3.5.1.2 Local

2016 Power Integrated Resource Plan

The 2016 Power Integrated Resource Plan guides the Los Angeles Department of Water and Power's (LADWP) efforts to supply reliable electricity in an environmentally responsible and cost effective manner (Los Angeles Department of Water and Power, 2016). The 2016 Power Integrated Resource Plan analyzes the economic and environmental impact of increased local solar, energy storage, and transportation electrification and recommends strategies to meet the future electric needs of the City. A primary strategy of the Integrated Resource Plan is to improve energy efficiency through reducing greenhouse gas emissions, with a goal of increasing the renewable portfolio standard to 55 percent by 2030 and 65 percent by 2036.

2017 Los Angeles Green Building Code

The Los Angeles Green Building Code (LAGBC), codified in the City's Green Building Ordinance (Los Angeles Municipal Code, Chapter IX, Article 9), is based on CALGreen. The LAGBC applies to the following types of projects: all new buildings (residential and non-residential); all additions (residential and non-residential); alterations with building valuations of $200,000 or more (residential and nonresidential); and residential alterations that increase the building's conditioned volume. Like CALGreen, the LAGBC includes mandatory measures and standards for achieving energy efficiency.

Sustainable City pLAn

The City developed the *Sustainable City pLAn* (Plan) in 2015, and an updated annual report was published in 2019, titled L.A.'s Green New Deal (Office of the Los Angeles Mayor, 2019). The plan consists of 47 targets with milestones and initiatives for a cleaner environment and stronger economy. The plan describes the City's vision for increasing energy efficiency, with targets of reducing building energy use per square foot for all building types by 34% by 2035.

Green LA and ClimateLA

In May 2007, the City published *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*, which included more than fifty specific climate mitigation actions designed to reduce the City's contributions to climate change, and to prepare a response to the changes that have already begun to occur (City of Los Angeles, 2007). City departments worked together to respond to the recommendations set forth in the *Green LA* action plan, resulting in *ClimateLA*. *ClimateLA* is an implementation program that provides detailed information about each action item discussed in the *Green LA* framework, as well as adaptation measures and mitigation. Some of the adaptive action items recommended include making Los Angeles a worldwide leader in green buildings, reducing water consumption, utilizing renewable energy sources, and converting the City's fleet to cleaner and more efficient models. *Green LA* and *ClimateLA* were established with the goal of reducing greenhouse gas emissions; however, these efforts would result in the added benefit of decreasing energy consumption in the City.

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently undergoing revision. The General Plan elements that pertain to Energy include Plan for a Healthy Los Angeles, Air Quality, Mobility Plan 2035, and Conservation, which establish the following applicable policies:

Healthy Building Design and Construction Element

- Policy 2.2: Promote a healthy built environment through constructing buildings designed to reduce energy costs, promoting green building standards, and increasing energy efficiency.

Air Quality Element

- Policy 5.1.2: Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.

Mobility Plan 2035

- Objective SF-12: Continue to refront existing street lighting infrastructure with energy-efficient LEDs.

Conservation Element

- Policy 1: Continue to encourage energy conservation and petroleum product reuse.

3.5.2 Environmental Setting

The CEC California Energy Consumption Database reports energy consumption data for various utilities, agencies, counties, and planning areas. In 2019, the total electricity consumption in Los Angeles County was 46,556 gigawatt hours (GWh) for non-residential sectors and 19,562 GWh for residential sectors, for a total of 66,118 GWh. Gas consumption in Los Angeles County was 1,813 million therms for non-residential uses and 1,236 million therms for residential uses, for a total of 3,048 million therms (California Energy Commission, 2019).

Electricity is supplied to the Project Area by the LADWP. LADWP operates 34 generation plants with a total capacity of approximately 8,009 megawatts. The department's energy supply comes from a variety of energy sources, including renewable sources, natural gas, nuclear, hydroelectric, and coal (Los Angeles Department of Water and Power, 2019).

LADWP serves over 4 million residents covering an area of 465 square miles (Los Angeles Department of Water and Power, 2019). LADWP energy sources for the 2016 calendar year are summarized in **Table 3.5-1**. LADWP's electric capacity is approximately 7,880 megawatts and the record instantaneous peak demand for electricity was 6,502 megawatts, which was reached on August 31, 2017. LADWP electricity usage for various sectors in 2017 is summarized in **Table 3.5-2**.

The Southern California Gas Company (SoCalGas) provides natural gas to the City. SoCalGas is the nation's largest distributor of natural gas, serving 21.6 million consumers over 20,000 square miles throughout Central and Southern California (Southern California Gas Company, n.d.).

Transportation accounted for approximately 40 percent of the energy consumption in California in 2016. In the same year, California consumed approximately 3,116 trillion British thermal units (BTU) for the transportation sector energy, from natural gas, petroleum, and electricity sources. In 2017, California consumed approximately 350,604 thousand barrels of gasoline, or approximately 1,772 trillion BTU, for the transportation sector. In the same year, California consumed approximately 82,842 thousand barrels of diesel, or 477 trillion BTU, for the transportation sector (U.S. Energy Information Administration, 2018).

Table 3.5-1: LADWP Energy Sources (Calendar Year 2019)

Energy Source	Percent
Renewable Energy[1]	34%
Natural Gas	27%
Nuclear	14%
Large Hydroelectric	3%
Coal	21%
Other/Unspecified Sources of Power	0%

1. Renewable energy sources include biomass and waste (0%), geothermal (9%), eligible hydroelectric (3%), solar (12%), and wind (10%).
Source: (Los Angeles Department of Water and Power, 2019)

Table 3.5-2: 2019 LADWP Electricity Consumption

Sector	Electricity Consumption (GWh)
Agriculture & Water Pump	21.6
Commercial Building	11,115.8
Commercial Other	937.8
Industry	11,780.9
Mining & Construction	273.3
Residential	7,388.6
Streetlight	106
Total Usage	21,624

Source: (California Energy Commission, 2019)

The existing energy usage in the Project Area was quantified using the California Emissions Estimator Model (CalEEMod) v2016.3.2 computer program, using the assumption that the existing land use is classified as "General Heavy Industry." Existing energy use is summarized in **Table 3.5-3** and detailed calculations are provided in **Appendix B-14**.

Table 3.5-3: Existing Energy Use in the Project Area

Energy Source	Annual Energy Consumption	Annual MMBTU
Electricity	2,485,290 kWh	8,480
Natural Gas	4,052,590 kBTU	4,053
Mobile Fuel (Diesel)	30,098 gallons	4,135
Mobile Fuel (Gasoline)	47,797 gallons	5,756
Water Conveyance & Treatment	52 million gallons	2,300
	Total	24,724

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program, using the assumption that the existing land use is classified as "General Heavy Industry."
MMBTU = million British thermal units; kWh = kilowatt hours; kBTU = kilo-British thermal unit
Source: (Ambient Air Quality & Noise Consulting, 2019)

3.5.3 Environmental Impact Analysis

3.5.3.1 Methodology

Construction

Regarding energy use (e.g., fuel use) during construction, it is assumed that only diesel fuel would be used in construction equipment. On-road vehicles for hauling materials and worker commute trips assumed a mix of diesel and gasoline fuel use. Construction schedules, equipment numbers, horsepower ratings, and load factors were used to calculate construction-related fuel use, based on default assumptions contained in the CalEEMod. Diesel fuel used for off-road equipment was estimated based on a factor of 0.05 gallons of diesel fuel per brake-horsepower hour derived from the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook (South Coast Air Quality Management District, 1993). Average fuel usage rates by vehicle class, fuel type (e.g., diesel, gasoline, electric, and natural gas), and average vehicle trip distances for on-road vehicles were obtained from the California Air Resources Board's (CARB) EMFAC2017 mobile-source emissions inventory for Los Angeles County. In addition, to aid in the comparison of energy use associated with the various categories evaluated, total energy use was converted to BTU, which are reported in units of one million BTU (MMBTU).

Operation

Proposed Project operation would include the consumption of diesel and gasoline fuel from on-road vehicles. Transportation fuel-use estimates were calculated by applying average fuel usage rates per vehicle mile to vehicle miles traveled (VMT) data associated with the proposed Project. Vehicle miles traveled was derived from the CalEEMod modeling conducted for the proposed Project. Daily VMT for special events were adjusted to annual VMT based on the estimated number of annual events. Average fuel usage rates by vehicle class, fuel type (e.g., diesel, gasoline, electric, and natural gas), and average

vehicle trip distances were obtained from CARB's EMFAC2017 mobile-source emissions inventory for Los Angeles County. Building energy use was estimated using CalEEMod, version 2016.3.2.

Energy use was calculated for both existing and proposed land uses. CalEEMod includes 63 different land use types for which trip rates have been established. The existing land use was classified as General Heavy Industry. Proposed land uses that would occur at the Project Site were classified as the following: City Park (1.45 Acre Park), City Park (5.71 Acre Park) Fast Food Restaurant without Drive Thru (700 square foot café), Health Club (2,000 square foot building), City Park (two soccer fields), City Park (one acre park special events). To aid in the comparison of energy use associated with the various categories evaluated, total energy use was converted to BTU, which are reported in units of MMBTU.

3.5.3.2 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Energy if it would:

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

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

3.5.3.3 Construction Impacts

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

During the construction period, equipment and vehicles would primarily be powered by diesel fuel and would likely require minimal electricity. Estimated construction-period fuel use is summarized in **Table 3.5-4** and detailed calculations are provided in **Appendix B-14**. As shown in **Table 3.5-4**, construction-period fuel use would be 23,681 MMBTU over the entire construction period, or approximately 789 MMBTU when amortized over the anticipated 30-year life of the project.[i]

Construction-period energy use includes the energy that would be used for haul trips, equipment use, and worker commute trips.

[i] Construction-period energy consumption was divided over the anticipated 30-year life of the proposed Project, which is consistent with the methodology for estimating greenhouse gas emissions (see Section 3.7). Although construction would occur over a period of approximately two years for Phase I and six months for Phase II, this method is intended to apportion the upfront energy consumption over the life of the proposed Project.

Table 3.5-4: Estimated Construction-Period Fuel Use

	Diesel Fuel Use (gallons)	Gasoline Fuel Use (gallons)	MMBTU
Overall Construction Energy Use	157,403	17,080	23,681
Amortized Construction Energy Use[1]	5,237	569	789

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program.
1. Construction energy use was amortized over an assumed 30-year project life.
MMBTU = million British thermal units
Source: (Ambient Air Quality & Noise Consulting, 2019)

The fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. Best management practices (BMP) and mitigation measures to reduce air quality and greenhouse gas emissions would be implemented during the construction period, which would contribute to reductions in energy consumption (see Sections 3.2 and 3.7). These measures include complying with SCAQMD rules and regulations, implementing idling limitations, using equipment that meets Tier 4 off-road emission standards, and offering ride-share and transit incentives for construction workers. As such, the proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction. Therefore, impacts would be less than significant and no further mitigation is required.

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

Applicable plans related to renewable energy or energy efficiency include the California Long-Term Energy Efficiency Strategic Plan, LADWP 2016 Power Integrated Resource Plan, *Sustainable City pLAn*, *Green LA*, and *ClimateLA*, which are described in Section 3.5.1. As discussed under **VI(a)** above, the fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. In addition, the proposed Project includes various air quality and greenhouse gas BMPs and mitigation measures that would reduce energy consumption associated with the use of construction equipment. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and the impacts would be less than significant.

3.5.3.4 Operational Impacts

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

Proposed Project features, such as park lighting, WiFi, security cameras, on-site buildings (café, concessions area, restrooms, and office), and electric vehicle charging station, would require electricity or natural gas for energy. Special events could require electricity to power sound and lighting equipment. In addition, proposed Project operation would include the consumption of diesel and gasoline fuel from on-road vehicles traveling to the Project Site.

Estimated operational energy use is summarized in **Table 3.5-5** and detailed calculations are provided in **Appendix B-14**. As shown in **Table 3.5-5**, the proposed Project would result in a net reduction in

energy consumption of approximately 15,015 MMBTU, or a decrease of approximately 61 percent, when compared with the energy consumption associated with the existing industrial land use.

Table 3.5-5: Estimated Operational Energy Use

Energy Source	Annual Energy Consumption	Annual MMBTU
Electricity	192,751 kWh	658
Natural Gas	197,732 kBTU	198
Mobile Fuel (Diesel)	25,628 gallons	3,521
Mobile Fuel (Gasoline)	40,698 gallons	4,901
Water Conveyance & Treatment	11 million gallons	432
	Total	9,709
	Total Existing Energy Use	24,724
	Net Change Compared to Existing Energy Use	-15,015 (-61%)

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program. The existing land use was classified as General Heavy Industry and the proposed land uses at the Project Site include the following: City Park (1.45 acre park), City Park (5.71 acre park) Fast Food Restaurant without Drive Thru (700 square foot café), Health Club (2,000 square foot buildings), City Park (two soccer fields), and City Park (one acre park special events).
MMBTU = million British thermal units; kWh = kilowatt hours; kBTU = kilo-British thermal unit
Source: (Ambient Air Quality & Noise Consulting, 2019)

The proposed Project would include improvements to active transportation options; design features that reduce energy use, water use, and waste generation (i.e., low-flow water fixtures, water-efficient irrigation systems, and high-efficiency lighting); and the conversion of industrial uses to open space uses, which would contribute to reductions in energy consumption. In addition, the proposed buildings would conform to the California Building Standards Code and Los Angeles Green Building Code to meet energy efficiency requirements. As such, the proposed Project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy features during operation. Therefore, impacts would be less than significant, and no mitigation is required.

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

Applicable plans related to renewable energy or energy efficiency include the California Long-Term Energy Efficiency Strategic Plan, LADWP 2016 Power Integrated Resource Plan, *Sustainable City pLAn*, and *Green LA* and *ClimateLA*, which are described in Section 3.5.1. In comparison to the existing industrial uses that were removed, the proposed Project would result in an overall net reduction of long-term operational energy use of roughly 15,015 MMBTU, or 61 percent (see **Table 3.5-5**). Proposed Project features, including improvements to active transportation options; design features that reduce energy use, water use, and waste generation (i.e., low-flow water fixtures, water-efficient irrigation systems, and high-efficiency lighting); and the conversion of industrial uses to open space uses, would contribute to reductions in energy consumption. As a result of these energy-saving features, the proposed Project would be consistent with the goals outlined in state and local energy plans. Therefore, the project would

not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

3.5.4 Best Management Practices

There are no proposed BMPs specifically for Energy. With implementation of the BMPs identified in Section 3.2.4 (Air Quality) and Section 3.7.4 (Greenhouse Gas Emissions), construction-related energy use would be minimized to the greatest extent feasible.

3.5.5 Mitigation Measures

There are no proposed mitigation measures specifically for Energy. Implementation of the mitigation measures identified in Section 3.2.4 (Air Quality), would reduce impacts related to construction-related energy use. Impacts related to Energy would be less than significant.

3.5.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Energy resulting from implementation of the proposed Project.

3.5.7 Cumulative Impacts

Fuel consumption from construction activities would represent a negligible increase in regional energy consumption, while operation of the proposed Project would result in an overall net reduction of long-term energy use when compared to the existing industrial land use. Therefore, it is anticipated that existing energy service providers have adequate capacity to serve the energy demands of the proposed Project.

Growth and development in the Project Area are anticipated to contribute to increased demand for electricity, natural gas, and transportation energy. However, based on the 2016 Power Integrated Resource Plan, the City's increased energy demands are anticipated to be met with increased use of renewable energy sources, such as solar, wind, and geothermal power. In addition, increased transportation fuel demands would be minimized with improvements to the vehicle fuel economy pursuant to federal and state regulations and trends toward improving active transportation infrastructure (see Section 3.7, Greenhouse Gas Emissions for additional information). Like the proposed Project, other future transportation and development projects would be expected to incorporate energy conservation features, comply with applicable regulations related to energy use and efficiency, and incorporate BMPs and/or mitigation measures to reduce impacts related to energy. Therefore, the proposed Project would not result in cumulative impacts related to energy.