Section 3.5
Energy

3.5.1 Introduction

This section describes the geographic and regulatory setting for energy, discusses energy-consumption-related impacts (i.e., natural gas, electricity, and transportation fuels) that could result from the *2020 LA River Master Plan* and its elements, and determines the significance of those impacts. The analysis assesses the proposed Project's estimated consumption of energy resources during construction and operation and evaluates the proposed Project's consistency with State and local plans for renewable energy and energy efficiency. Where needed, this section identifies feasible mitigation measures that would reduce or avoid any significant impacts.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.5.2 Setting

3.5.2.1 Geographic

Regional Setting

Energy usage is typically quantified using the British thermal unit (BTU).[1] Because other units of energy can be converted into equivalent BTU, the BTU is used as a basis for comparing the consumption of different types of energy resources. California has a diverse portfolio of energy resources. In 2018, the State ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in conventional hydroelectric power generation. California is also the seventh-largest producer of crude oil in the nation, and, as of January 2019, it ranked third in oil refining capacity. Other energy production sources in the State include natural gas, nuclear electric power, and biofuels (U.S. Energy Information Administration 2020a).

[1] A *British thermal unit* (BTU) is a standard unit of energy measure, which is the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at or near the temperature at which water has its greatest density (39.2 degrees Fahrenheit). A *therm* is a unit of heat equivalent to 100,000 BTUs.

Energy efficiency efforts have dramatically reduced statewide per capita energy consumption relative to historical averages. While California consumed approximately 7,881 trillion BTUs of energy in 2017, which ranked second in the country, the per capita energy consumption (i.e., total energy consumption divided by the population) in 2017 was 200 million BTU, which ranked 48th among all states. Natural gas accounted for the majority of energy consumption (28 percent), followed by motor gasoline (22 percent), distillate and jet fuel (16 percent), interstate electricity (8 percent), hydroelectric power and other renewables (12 percent), biomass (3 percent), and a variety of other sources. The transportation sector consumed the highest quantity of energy (40 percent), followed by the industrial and commercial sectors. (U.S. Energy Information Administration 2020a.)

The project study area is located within a highly urbanized area of Los Angeles County. The energy consumption of electricity, natural gas, and transportation fuels (i.e., gasoline and diesel fuel) in California and the County in 2018 is shown in Table 3.5-1.

Table 3.5-1. Energy Consumption in California and Los Angeles County in 2018

Energy Resource	California Consumption		Los Angeles County Consumption		
	Mass	Million BTUs	Mass	Million BTUs	Percent of Total California Consumption
Electricity	255,224 GWh	870,824,288[a]	68,486 GWh	233,674,870[a]	27%
Natural Gas	2,207.4 million therms	2,207,400,000[b]	2,921 million therms	292,144,664[b]	13%
Gasoline[c]	15,471 million gallons	1,698,282,612[d]	3,638 million gallons	399,350,536[d]	24%
Diesel Fuel[c]	1,777 million gallons	226,496,420[e]	253 million gallons	32,247,380[e]	14%

Source: California Energy Commission 2019, 2020; U.S. Energy Information Administration 2019, 2020b.

[a] Estimated based on conversion factor of 3,412,000,000 BTU per 1 Gigawatt-hour (GWh).

[b] Estimated based on conversion factor of 100,000 BTU per therm.

[c] Estimated fuel sales based on data obtained from retail transportation fueling stations in California by the California Energy Commission.

[d] Estimated based on conversion factor of 109,772 BTU per 1 gallon of gasoline.

[e] Estimated based on conversion factor of 127,460 BTU per 1 gallon of diesel.

BTU = British Thermal Unit

As shown in Table 3.5-1, Los Angeles County's consumption of electricity and natural gas made up approximately 27 and 13 percent, respectively of the State's consumption in 2018. During that year, the estimated gasoline and diesel fuel consumption in the County consisted of approximately 24 and 14 percent, respectively, of the State's fuel consumption.

Natural Gas

Natural gas throughout the project study area is provided almost exclusively by Southern California Gas Company (SoCalGas), with the City of Long Beach providing natural gas service to its residents and businesses from its publicly owned natural gas utility. Additionally, natural gas service in the City of Vernon is provided by both SoCalGas and the City of Vernon's own natural gas system. The

discussion below identifies the natural gas providers for all frames; where providers differ, select frames are described separately.

Frames 1 through 9

SoCalGas, Pacific Region, is the principal distributor of natural gas in Southern California, providing retail and wholesale customers with transportation, exchange, and storage services as well as procurement services to most retail core customers. As the nation's largest natural gas distribution utility, SoCalGas is responsible for providing energy to its 21.8 million consumers over a 24,000-square-mile service area throughout central and Southern California. The company maintains 5.9 million meters in more than 500 communities. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery and electric generation customers in Southern California. As a public utility, SoCalGas is under the jurisdiction of federal and State regulatory agencies (SoCalGas 2020). Within the project study area, SoCalGas provides natural gas services to all the cities, with the exception of the City of Long Beach, and unincorporated County areas.

Aliso Canyon, located in Los Angeles County, is California's largest underground natural gas storage facility and has a total working capacity of 86 billion cubic feet of natural gas, or about 64 percent of SoCalGas' total storage capacity. On October 23, 2015, a natural gas leak in well SS25 was detected at the Aliso Canyon natural gas storage facility owned by SoCalGas. The leak was stopped on February 11, 2016, and well SS25 was permanently sealed on February 18, 2016 (SoCalGas 2018). Following the leak, the facility's maximum working gas storage level is limited to 23.6 billion cubic feet, about 28 percent of the facility's maximum capacity. Because of the limited maximum storage of Aliso Canyon, the company's natural gas supply has dropped significantly. Nevertheless, a study commissioned by the County found that the storage facility was not necessary to maintain electricity reliability in the area, as demand response, energy storage, and energy efficiency could alleviate market supply issues (EES Consulting, Inc. 2017).

SoCalGas' total natural gas consumption in 2018 was approximately 515,607,894 million BTUs (California Energy Commission 2020). According to the *2019 California Gas Report Supplement*, SoCalGas projects total gas demand to decline at an annual rate of 0.74 percent from 2018 to 2035 (California Gas and Electric Utilities 2018). The decline in throughput demand is due to modest economic growth, California Public Utilities Commission (CPUC)-mandated energy efficiency standards and programs, tighter building code standards (Title 24), renewable electricity goals, the decline in commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure. Table 3.5-2 summarizes the projected annual gas requirements in Southern California through year 2035.

Table 3.5-2. Southern California Projected Annual Gas Requirements Through Year 2035

2020		2025		2030		2035	
MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day
2,566	2,566,000	2,422	2,422,000	2,310	2,310,000	2,313	2,313,000

Source: California Gas and Electric Utilities 2018.

Note: Assumes average temperature and normal hydro year.

BTU = British Thermal Unit; MMcf = million cubic feet

SoCalGas expects it will be able meet their forecasted demand with a combination of in- and out-of-state gas sources (California Gas and Electric Utilities 2018).

Frames 1 through 2

Within the City of Long Beach, the natural gas utility under the Energy Resources Department (formerly known as the Long Beach Oil & Gas Department) provides natural gas service to its residents and businesses. The publicly owned natural gas utility has been established since 1924 and has over 1,800 miles of gas pipelines (City of Long Beach 2020). Serving approximately 150,000 customers, Long Beach is the largest California municipal gas utility and the fifth largest municipal gas utility in the United States, with a service territory that includes the Cities of Long Beach and Signal Hill, and sections of surrounding communities including Lakewood, Bellflower, Compton, Seal Beach, Paramount, and Los Alamitos (California Gas and Electric Utilities 2018).

Long Beach currently receives approximately 5 percent of its gas supply from local production fields that are located within Long Beach's service territory, as well as offshore. The majority of Long Beach supplies are purchased at the California border, primarily from the southwestern U.S. As a wholesale customer, Long Beach receives intrastate transmission service for this gas from SoCalGas. (California Gas and Electric Utilities 2018)

Long Beach's total natural gas consumption in 2018 was approximately 8,830,055 million BTUs (California Energy Commission 2020). According to the *2019 California Gas Report Supplement*, Long Beach's gas use is expected to decline slightly from 9 billion cubic feet (Bcf) in 2017 to 8 Bcf by 2035 (California Gas and Electric Utilities 2018).[2] Table 3.5-3 summarizes the projected annual gas requirements in Southern California through year 2035.

Table 3.5-3. City of Long Beach Energy Resources Department Projected Annual Gas Requirements Through Year 2035

2020		2025		2030		2035	
MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day	MMcf/day	Million BTUs/day
23.8	23,800	24.0	24,000	24.4	24,400	24.7	24,700

Source: California Gas and Electric Utilities 2018.
Note: Assumes average temperature.
BTU = British Thermal Unit; MMcf = million cubic feet

Frame 4

Natural gas service in the City of Vernon is currently provided by both SoCalGas and the City of Vernon's own natural gas system. The City of Vernon's municipal gas service was initiated in 2005, and since that time there has been a gradual increase of commercial/industrial gas demand as customers within the city boundaries have left the SoCalGas retail system and interconnected with Vernon's municipal gas system (California Gas and Electric Utilities 2018). Both Vernon's gas system and the SoCalGas system comprise an extensive network of underground piping and above-ground meters that transport natural gas to customers in the city.

The City of Vernon's total natural gas consumption in 2018 was approximately 3,580,437 million BTUs (California Energy Commission 2020). The forecasted natural gas supply throughput in 2017

[2] 1 Bcf = 1.027 trillion BTU.

was at 8.6 Bcf and is anticipated to increase to 9.2 Bcf by 2035 as new customers are expected to request retail service from Vernon (California Gas and Electric Utilities 2018).

Electricity

Electricity throughout the project study area is provided almost exclusively by Southern California Edison (SCE), with City of Los Angeles Department of Water and Power (LADWP), City of Burbank Water and Power, City of Glendale Water and Power, and Vernon Public Utilities providing electricity to the Cities of Los Angeles, Burbank, Glendale, and Vernon, respectively. Accordingly, the frames where these cities are located are discussed separately.

Frames 1 through 9

Southern California Edison

As one of the nation's largest electric utilities, SCE provides electricity to approximately 15 million people in a 50,000-square-mile service area that includes portions of 15 counties and hundreds of cities and communities within Central, Coastal, and Southern California (Southern California Edison 2019a). In 2019, SCE's power system experienced a peak demand of 22,009 megawatts (MW), and the annual electricity sale to customers was approximately 84,654,000 megawatt-hours (MWh) (Edison International and Southern California Edison 2019). Within the project study area, SCE would be the retail seller of electricity to the Cities of Long Beach, Carson, Compton, Cudahy, Downey, Lynwood, Paramount, South Gate, Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and unincorporated County areas.

Under California's Renewables Portfolio Standard (RPS) program, all electricity retail sellers in the State must meet established renewable procurement targets in their retail electricity supply. The use of renewable energy sources by electricity retail sellers include wind, solar photovoltaic (PV), solar thermal, hydroelectricity, geothermal, and bioenergy. The RPS program was initially established in 2002 by Senate Bill (SB) 1078, which required that 20 percent of electricity retail sales must be served by renewable resources by 2017. The program was subsequently accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030 and included interim annual RPS targets with 3-year compliance periods that also required 65 percent of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 was signed into law, which increased the RPS to: (1) 50 percent of retail sales by 2026 (moved up by 4 years from SB 350), (2) 60 percent of retail sales by 2030, and (3) 100 percent of retail sales by 2045 (carbon-free goal for 2045). Thus, SCE would be required to meet the renewable procurement targets under the RPS program. SCE's energy resource mix used for electricity generation as of 2018 is shown in Table 3.5-4. As shown, renewable sources currently make up 36 percent of SCE's power mix, which is greater than the statewide power mix.

Table 3.5-4. SCE Energy Resources for Electricity Generation in 2018

Energy Resource	2018 SCE Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	36%	31%
Biomass and Biowaste	*1%*	*2%*
Geothermal	*8%*	*5%*
Eligible Hydroelectric	*1%*	*2%*
Solar	*13%*	*11%*
Wind	*13%*	*11%*
Coal	0%	3%
Large Hydroelectric	4%	11%
Natural Gas	17%	35%
Nuclear	6%	9%
Other	0%	<1%
Unspecified sources of power[b]	37%	11%
Total	100%	100%

Source: Southern California Edison 2019b.
[a] Percentages are estimated annually by the California Energy Commission.
[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

City of Los Angeles Department of Water and Power

LADWP's service territory covers a 465-square-mile area in Los Angeles and much of the Eastern Sierras in Owens Valley. LADWP supplies more than 26 million MWh of electricity per year for its 1.5 million residential and business customers. The department is responsible for the maintenance of over 10,000 miles of overhead distribution lines and underground distribution cables and 15,452 transmission towers. They also maintain 160 distributing stations, 21 receiving stations, and over 50,000 substructures. About 70 percent of the electricity in the City of Los Angeles is consumed by business and industry, with the remaining 30 percent by residential uses averaging about 500 kilowatt hours of usage per month (Los Angeles Department of Water and Power 2020). LADWP's total electricity consumption in 2018 was 22,078,000 MWh (California Energy Commission 2020). The energy resource mix used by LADWP for electricity generation as of 2018 is shown in Table 3.5-5. As shown, renewable sources currently make up 32 percent of SCE's power mix, which is greater than the statewide power mix. Within the project study area, LADWP provides power and electrical services to the City of Los Angeles.

Table 3.5-5. LADWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 LADWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	32%	31%
Biomass and Biowaste	*0%*	*2%*
Geothermal	*7%*	*5%*
Eligible Hydroelectric	*2%*	*2%*
Solar	*13%*	*11%*
Wind	*11%*	*11%*
Coal	18%	3%
Large Hydroelectric	3%	11%
Natural Gas	30%	35%
Nuclear	10%	9%
Other	0%	<1%
Unspecified sources of power[b]	6%	11%
Total	100%	100%

Source: Los Angeles Department of Water and Power 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

In the 2017 *Power Strategic Long-Term Resource Plan*, which serves as a comprehensive 20-year roadmap that guides the LADWP's Power System in its efforts to supply reliable electricity in an environmentally responsible and cost effective manner, a forecast of future growth in annual peak energy demand was prepared. LADWP's Load Forecast incorporates updates to reflect the latest load forecast, fuel price and projected renewable price forecasts, and other numerous modeling assumptions. A summary of the projected growth in annual peak energy demand for LADWP's service area through 2040 is shown in Table 3.5-6.

Table 3.5-6. LADWP Forecasted Growth in Annual Peak Energy Demand

Fiscal Year	Base Case Peak Demand (MW)	Growth Rate Base Year 2010–2011	One-in-Ten Park Demand (MW)
2021–2022	5,889	0.5%	6,423
2026–2027	6,129	0.7%	6,640
2036–2037	6,716	0.8%	7,288
2040–2041	6,998	0.8%	7,600

Source: Los Angeles Department of Water and Power 2017.
MW = megawatts

Frame 4

Vernon Public Utilities

Within the City of Vernon, Vernon Public Utilities (VPU) serves about 2,000 mainly commercial and industrial customers with electric sales of approximately 1,128 gigawatt-hours (GWh) annually and peak loads of approximately 184 MW in the summer and 174 MW in the winter. Large and small commercial and industrial load comprises 99 percent of VPU's demand and energy sales. The VPU

electric system has an annual average load factor of over 70 percent due to its predominantly industrial customer mix (Vernon Public Utilities 2018). VPU's total electricity consumption in 2018 was 1,025,571 MWh (California Energy Commission 2020).

The energy resource mix used by VPU for electricity generation as of 2018 is shown in Table 3.5-7. As shown, renewable sources currently make up 35 percent of VPU's power mix, which is greater than the statewide power mix.

Table 3.5-7. VPU Energy Resources for Electricity Generation in 2018

Energy Resource	2018 VPU Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	35%	31%
Biomass and Biowaste	*15%*	*2%*
Geothermal	*0%*	*5%*
Eligible Hydroelectric	*0%*	*2%*
Solar	*18%*	*11%*
Wind	*2%*	*11%*
Coal	0%	3%
Large Hydroelectric	1%	11%
Natural Gas	29%	35%
Nuclear	5%	9%
Other	0%	<1%
Unspecified sources of power[b]	30%	11%
Total	100%	100%

Source: Vernon Public Utilities 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

VPU = Vernon Public Utilities

In 2018 VPU developed an integrated resource plan (IRP) that is designed to provide a long-term strategy to meet the electric service needs of its customers and comply with State and federal policies. The VPU IRP represents a road map charting a resource acquisition strategy favoring the procurement of more renewable energy resources and fewer carbon-emitting resources in compliance with SB 350 and SB 100 requirements. To meet these requirements, the VPU IRP identified a need to acquire additional renewable resources starting in 2021. Additionally, the plan identified a Preferred Portfolio that represents a diversified, least-cost resource plan that satisfies VPU's system reliability, compliance with RPS requirements, and reduction of greenhouse gas (GHG) emissions. The Preferred Portfolio recommends procuring 65 MW of solar in 2021, 20 MW in 2023, and an additional 20 MW in 2026 for a total cumulative solar investment of 105 MW by 2030. The Preferred Portfolio also includes the acquisition of 27 MW of wind in 2025 and 20 MW of geothermal in 2029 to provide resource diversity. The VPU IRP indicated that the Preferred Portfolio would comply with RPS and GHG reduction mandates by 2030.

Frame 6

City of Glendale Water and Power

Within the City of Glendale, Glendale Water and Power (GWP) serves nearly 89,000 electrical customers providing service to virtually all homes, businesses, and institutions within its limits. GWP's annual retail electrical load obligation is approximately 1.45 million. GWP relies on a combination of both local and remote generation, coupled with open market purchases. GWP's local electrical system exists in what is known as a "load pocket," meaning GWP has very limited capacity to transmit power from outside the Los Angeles basin to Glendale's load. The local peak demand was 344 MW in 2018 while the only two inbound transmission lines have a combined reliable capacity of 200 MW, necessitating local generation capability. Additionally, due to the eventual retirement of GWP's Grayson power plant in 2021, GWP indicated that it would have insufficient resources to reliably meet the energy needs of Glendale. While GWP initially proposed a plan to build 262 MW of combined cycle and combustion turbine gas-powered resources at the Grayson location, it is currently evaluating potential cleaner alternatives to reduce the GHG impacts of the plan (City of Glendale Water and Power 2019).

GWP's total electricity consumption in 2018 was 1,043,000 MWh (California Energy Commission 2020). The energy resource mix used by GWP for electricity generation as of 2018 is shown in Table 3.5-8. As shown, renewable sources currently make up 36 percent of GWP's power mix, which is greater than the statewide power mix.

Table 3.5-8. GWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 GWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	36%	31%
Biomass and Biowaste	*11%*	*2%*
Geothermal	*2%*	*5%*
Eligible Hydroelectric	*6%*	*2%*
Solar	*2%*	*11%*
Wind	*15%*	*11%*
Coal	4%	3%
Large Hydroelectric	9%	11%
Natural Gas	29%	35%
Nuclear	6%	9%
Other	6%	<1%
Unspecified sources of power[b]	10%	11%
Total	100%	100%

Source: City of Glendale 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

GWP = Glendale Water and Power

In 2019 GWP developed its IRP to meet the State's power reliability requirements. In developing its resource portfolio, GWP plans to replace the local capacity lost from retirement of the Grayson power plant with a diverse mix of energy resources, with a goal of providing the cleanest power

possible while maintaining reliability at a reasonable cost in a transmission-constrained location. The proposed power plan includes the following.

- 28 MW of energy efficiency and demand response, including behind-the-meter batteries
- 23 MW of distributed solar and storage
- 75 MW / 300 MWh of local, utility-scale batteries
- 93 MW of internal combustion engines to provide flexible and local back-up generation

GWP indicates that the recommended portfolio in its IRP would outperform standards for reliability, GHG emissions, and renewable portfolio content while simultaneously saving over $125 million in costs and reducing thermal capacity by 169 MW compared to GWP's previous 2015 power plan.

Frame 7

Burbank Water and Power

Within the City of Burbank electricity is provided by Burbank Water and Power (BWP). BWP is a publicly owned municipal utility that generates, transmits, and distributes power to Burbank customers (Burbank Water and Power 2018). BWP's total electricity consumption in 2018 was 1,073,059 MWh (California Energy Commission 2020). The energy resource mix used by BWP for electricity generation as of 2018 is shown in Table 3.5-9. As shown, renewable sources currently make up 32 percent of BWP's power mix, which is greater than the statewide power mix.

Table 3.5-9. BWP Energy Resources for Electricity Generation in 2018

Energy Resource	2018 BWP Power Mix	2018 California Power Mix[a] (for comparison)
Eligible Renewable	32%	31%
Biomass and Biowaste	*2%*	*2%*
Geothermal	*2%*	*5%*
Eligible Hydroelectric	*2%*	*2%*
Solar	*12%*	*11%*
Wind	*13%*	*11%*
Coal	28%	3%
Large Hydroelectric	1%	11%
Natural Gas	30%	35%
Nuclear	5%	9%
Other	0%	<1%
Unspecified sources of power[b]	3%	11%
Total	100%	100%

Source: Burbank Water and Power 2019.

[a] Percentages are estimated annually by the California Energy Commission.

[b] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

BWP = Burbank Water and Power

In December 2018, BWP adopted its 2019 IRP to serve as a long-term planning document designed to provide policy guidance for BWP's electric supply to its customers for 20 years, from 2019 through 2038, that meets the State's policies. As a long-term plan, the IRP is directional rather than

determinative, where the IRP is meant to help BWP see the broad contours of its energy future and the general direction BWP should head to reach that future; it is not a roadmap for decision-making beyond the near-term. Through the IRP process, BWP found that while the business of providing Burbank with reliable, affordable, and sustainable electric service is changing rapidly, the policy guidelines for its business remain largely the same as approved in the previous 2015 IRP. These policy guidelines are as follows:

1. BWP should continue to meet electricity demand growth from energy efficiency and conservation, then renewables. BWP does not plan any new fossil-fueled power generation, except as needed to cost-effectively integrate renewable energy and maintain reliability.
2. BWP should optimize cost-effective energy efficiency and conservation programs.
3. BWP should add renewable energy to the extent needed.
4. BWP should plan to achieve greenhouse gas emissions reductions consistent with State goals.
5. BWP should maintain low cost of service, including striving to maintain rate increases at or below the long-run rate of inflation.

To fulfill the policy direction of the IRP, the following primary action items, which include activities on both the customer-side and the supply-side of the meter, were indicated in the IRP:

a. **Rate Design.** Design time-varying rates that encourage customers to shift their consumption away from higher cost periods to lower cost periods.

b. **Demand Response.** Consider cost-effective BWP customer Demand Response programs.

c. **Beneficial Electrification.** Enhance and extend BWP efforts to encourage growth in beneficial electrification that reduces GHG emissions, including electric vehicles.

d. **Disadvantaged Communities.** Develop and implement a program to target disadvantaged communities with selected BWP energy efficiency, demand response, and beneficial electrification programs.

e. **Intermountain Power Project (IPP) Coal Replacement.** Work with LADWP and other IPP participants to determine resources that will replace the IPP coal plant when it is retired in 2025. Particular focus should be given to BWP's share in the Southern Transmission System transmission line from the IPP site in Utah to Southern California.

f. **Transmission Delivery for Renewables.** Identify options and costs for transmission delivery of large quantities of renewable energy resulting from SB 100.

g. **Solar Over-Generation.** Work to mitigate the impact of solar generation (including morning and afternoon ramping, overgeneration, and instantaneous intermittency) such that reliability and affordability are maintained.

h. **Energy Imbalance Market (EIM) Participation.** Evaluate possible participation in the California Independent System Operator's EIM if and when BWP's Balancing Authority, LADWP, joins the EIM.

i. **Resource Positioning.** Position BWP's resources to work with the Duck Curve to the greatest extent possible to minimize costs and maximize reliability for Burbank. In this connection, evaluate further improvement in the operational flexibility of the Magnolia Power Project.

Overall, the IRP positions BWP to provide reliable, affordable, and sustainable electric service to Burbank for decades to come.

3.5.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of energy in this PEIR.

Federal

The Energy Policy and Conservation Act of 1975

The Energy Policy and Conservation Act of 1975 (EPCA) is a U.S. Act of Congress that responded to the 1973 oil crisis by creating a comprehensive approach to federal energy policy. The primary goals of EPCA are to increase energy production and supply, reduce energy demand, provide energy efficiency, and give the executive branch additional powers to respond to disruptions in energy supply.

Alternative Motor Fuels Act of 1988

The Alternative Motor Fuels Act of 1988 amended a portion of the EPCA to encourage the use of alternative fuels, including electricity. This act directed the Secretary of Energy to ensure that the maximum practicable number of federal passenger automobiles and light duty trucks be alcohol-powered vehicles, dual-energy vehicles, natural gas-powered vehicles, or natural gas dual-energy vehicles. The act directed the Secretary to conduct a study regarding such vehicles' performance, fuel economy, safety, and maintenance costs, and report to Congress the results of a feasibility study concerning the disposal of such alternative-fueled federal vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 establishes a comprehensive, long-term federal energy policy to be implemented by the U.S. Department of Energy. The Energy Policy Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy efficient homes, production or purchase of energy efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases.

Energy and Independence Security Act of 2007

The Energy Independence and Security Act was signed into law in 2007 and consists of provisions designed to increase energy efficiency and the availability of renewable energy. Key provisions of this act include the following:

- The Corporate Average Fuel Economy (CAFÉ) standards, which set a target of 54.5 miles per gallon for the combined fleet of cars and light trucks by model year 2025
- The Renewable Fuels Standard, which sets a modified standard that starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons by 2022

- The Energy Efficiency Equipment Standards, which include a variety of new standards for lighting and for residential and commercial appliance equipment
- The Repeal of Oil and Gas Tax Incentives, which include repeal of two tax subsidies in order to offset the estimated cost to implement the CAFÉ provision

Leadership in Energy and Environmental Design

Leadership in Energy and Environmental Design (LEED) is a rating system devised by the U.S. Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design. The system is credit-based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building. LEED was launched in an effort to develop a "consensus-based, market-driven rating system to accelerate the development and implementation of green building practices." The program is not rigidly structured; that is, not every project must meet identical requirements to qualify.

State

Assembly Bill 2076, Reducing Dependence on Petroleum (2000)

The California Energy Commission (CEC) and California Air Resources Board (CARB) are directed by Assembly Bill (AB) 2076 to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than 2003 demand by 2020.

Senate Bill 1389 (2002) and California Integrated Energy Policy Report

SB 1389 requires the CEC to develop an integrated energy report that contains an assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors. This report, known as the Integrated Energy Policy Report (IEPR), is adopted by the CEC every 2 years and updated every other year. The IEPR provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety. The current 2019 IEPR covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Senate Bill 1078

In 2002, SB 1078 (Public Utilities Code Chapter 2.3 § 387, 390.1, and 399.25) implemented a Renewable Portfolio Standard, which established a goal that 20 percent of the energy sold to customers be generated by renewable resources by 2017. The goal was accelerated in 2006 under SB 107 and expanded in 2011 under SB 2, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Senate Bill 100

In 2018, SB 100 (Public Utilities Code Chapter 312 § 399.11, 399.15, 399.30 and 454.53) increased the Renewable Portfolio Standard target and established State policy that renewable energy resources and zero-carbon resources supply all electricity procured to serve California end-use customers and the State Water Project by 2045. The bill requires the CPUC, CEC, Department of Water Resources, and CARB to incorporate this policy into all relevant planning, and use existing programs to achieve this policy.

California Building Standards Code, Title 24

California Building Energy Efficiency Standards, Title 24, Part 6

Title 24, Part 6 of the California Code of Regulations (also known as the *California Building Energy Efficiency Standards*) establishes energy conservation standards for new construction and additions and alterations to existing buildings. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality. The CEC is responsible for adopting, implementing, and updating the standards every 3 years. The current 2019 California Building Energy Efficiency Standards became effective on January 1, 2020, and improve upon the previous 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. It is estimated that single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades (California Energy Commission 2018).

California Green Building Standards Code, Title 24, Part 11

The California Green Building Standards Code (CALGreen) is a statewide mandatory green building code that applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects by all cities in California. Adopted as part of the California Building Standards Code (Part 11), CALGreen established voluntary standards that became mandatory under the 2010 edition of the code. These involved sustainable site development, energy efficiency (in excess of CEC requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were adopted in 2019 and took effect on January 1, 2020.

Regional

Los Angeles County General Plan

The *Los Angeles County General Plan* was adopted by the Los Angeles County Board of Supervisors on October 6, 2015. The general plan provides the policy framework for how and where the unincorporated County areas will grow through the year 2035, while recognizing and celebrating the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The *Los Angeles County General Plan* accommodates new housing and jobs within

the unincorporated areas in anticipation of population growth in the County and the region. The goals and policies associated with energy resources from the general plan that are applicable to the proposed Project are listed in Table 3.5-10.

Table 3.5-10. Applicable Los Angeles County General Plan Goals and Policies Related to Energy Resources

Element	Goals and Policies
Air Quality Element	**Goal AQ 3:** Implementation of plans and programs to address the impacts of climate change. • **Policy AQ 3.2:** Reduce energy consumption in County operations by 20 percent by 2015. • **Policy AQ 3.5**: Encourage energy conservation in new development and municipal operations.
Conservation and Natural Resources Element	**Goal C/NR 12:** Sustainable management of renewable and non-renewable energy resources. • **Policy C/NR 12.1:** Encourage the production and use of renewable energy resources. • **Policy C/NR 12.2:** Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands. • **Policy C/NR12.3:** Encourage distributed systems that use existing infrastructure and reduce environmental impacts.
Economic Development Element	**Goal ED 1:** An economic base and fiscal structures that attract and retain valuable industries and businesses. • **Policy ED 1.2:** Encourage and foster the development of the renewable energy economic sectors.
Land Use Element	**Goal LU 11:** Development that utilize sustainable design techniques. • **Policy LU 11.1:** Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies. • **Policy LU 11.4:** Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration; preventing habitat fragmentation; promoting stormwater retention; promoting the localized production of energy; promoting water conservation and reuse; maximizing interconnectivity; and utilizing public transit. • **Policy LU 11.8:** Encourage sustainable subdivisions that meet green neighborhood standards, such as Leadership in Energy and Environmental Design–Neighborhood Development (LEEDND).

Element	Goals and Policies
Parks and Recreation Element	**Goal P/R 1:** Enhanced active and passive park and recreation opportunities for all users. • **Policy P/R 1.9:** Offer more lighted playing fields using energy efficient light fixtures to extend playing time, where appropriate (e.g., not in areas adjacent to open space or natural areas that can be impacted by spillover lighting). **Goal P/R 6:** A sustainable parks and recreation system. • **Policy P/R 6.2:** Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks. • **Policy P/R 6.4:** Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy. • **Policy P/R 6.5:** Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.
Public Services and Facilities Element	**Goal PS/F 6:** A County with adequate public utilities. • **Policy PS/F 6.5:** Encourage the use of renewable energy sources in utility and telecommunications networks. • **Policy PS/F 6.8:** Encourage projects that incorporate onsite renewable energy systems.

Source: Los Angeles County 2015a.

Los Angeles County's Community Climate Action Plan

Los Angeles County's *Community Climate Action Plan* (CCAP), adopted in 2015, supplements the *Los Angeles County General Plan* and describes the County's efforts to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated County areas by at least 11 percent below 2010 levels by 2020 (Los Angeles County 2015b). The CCAP is set to expire in 2020, and current efforts are underway to approve an updated plan (refer to the subsequent subheading).

Among the CCAP's actions prescribed to reduce GHG emissions are those that fall under the Green Building and Energy strategy area. As part of this strategy area, the County identified previously developed energy efficiency and renewable energy programs that would continue to be implemented, including rebates and incentives for efficiency projects, innovative financing mechanisms to fund energy efficiency upgrades, sustainable policies for new building design, and implementation of projects to accelerate use of compressed natural gas as an alternative fuel. Additionally, the following new actions that are relevant to energy were identified in the CCAP under the Green Building and Energy strategy area to achieve additional GHG reductions:

- **BE-1:** Green Building Development. Encourage energy reductions in new development.
- **BE-2:** Energy Efficiency Programs. Sets goals for energy efficiency retrofits for existing development.
- **BE-3:** Solar Installations. Encourages solar installations for new and existing buildings.
- **BE-4:** Alternative Renewable Energy Programs. Promotes alternative renewable energies.
- **BE-5:** Wastewater Treatment Plant Biogas. Encourages renewable biogas projects.

- **BE-6:** Energy Efficiency Retrofits of Wastewater Equipment. Promotes efficient treatment equipment.
- **BE-7:** Landfill Biogas. Encourages renewable biogas projects at regional landfills.

Los Angeles County Climate Action Plan

Los Angeles County's *Community Climate Action Plan* (2020 CCAP), adopted in 2015, supplements the *Los Angeles County General Plan* and describes the County's plan to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated County areas by at least 11 percent below 2010 levels by 2020 (Los Angeles County 2015). The 26 local community actions relate to green buildings and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting (Los Angeles County 2015). On June 6, 2018, the County adopted an ordinance amendment to Title 22 in order to implement the 2020 CCAP actions. This ordinance allows for environmentally friendly roof and pavement materials and electric vehicle infrastructure, requires signs in on-site loading areas to encourage vehicle idle reduction, and regulates secondary land uses under high-voltage power lines in select zones.

As of August 2020, the 2020 CCAP is in the process of being updated. The draft *Los Angeles County Climate Action Plan* (CAP) builds upon the efforts within the 2020 CCAP, as well as the *OurCounty Los Angeles Countywide Sustainability Plan* (described below). The CAP outlines actions that the County plans to take to reduce GHG emissions and adapt to a changing climate in unincorporated County areas. The CAP ties together existing climate change initiatives and provides a blueprint for targeting carbon neutrality by 2045 in unincorporated County areas. In that sense, the CAP is aligned with EO B-55-18, which calls for statewide carbon neutrality by 2045. The CAP was released for public review in March 2020 and received public comments through April 2020 (Los Angeles County 2020). At this time, the anticipated adoption date of the plan is unknown.

Los Angeles Countywide Sustainability Plan

In July 2019, the County adopted the *Los Angeles Countywide Sustainability Plan* (OurCounty; Los Angeles County 2019). OurCounty includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan identifies lead County entities and partners for each goal. OurCounty is intended to help guide decision-making in unincorporated areas and provide a model for decision-making in the 88 incorporated cities in the County. As a strategic plan, OurCounty does not supersede land use plans that have been adopted by the Regional Planning Commission and Board of Supervisors, including the County's general plan and various community, neighborhood, and area plans. Overall, OurCounty proposes to make the County a more equitable, prosperous, and resilient region in the years ahead. The plan's goals and milestones include the following:

- Powering unincorporated areas and County facilities with 100 percent renewable energy by 2025
- Increasing urban tree canopy coverage by 15 percent by 2035
- Diverting more than 95 percent of waste from landfills
- Developing land-use tools to limit new development in high climate-hazard areas
- Phasing out single-use plastic by 2025 to ensure a cleaner ocean and less landfill waste
- Cutting back on imported water by sourcing 80 percent of water locally by 2045

- Ensuring that all residents have safe and clean drinking water, and that rivers, lakes and the ocean meet federal water quality standards
- Leading efforts to make sure that at least 65 percent of new housing is built within ½ mile of high frequency transit by 2035
- Supporting construction of more than half a million affordable housing units by 2045 to improve public health and community sustainability

Local

Frame 1

Frame 1 of the project study area includes the Cities of Long Beach and Los Angeles. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Long Beach

City of Long Beach General Plan

The *City of Long Beach General Plan* (City of Long Beach 1996) is a policy document that establishes the goals, policies, and directions the City of Long Beach will take to achieve the vision of the community and guide the future development of the city. Goals and policies that are either directly or indirectly related to energy resources can be found within Air Quality, Land Use, and Urban Design Elements of the *City of Long Beach General Plan.* These goals and policies are listed in Table 3.5-11.

City of Long Beach Climate Action and Adaptation Plan

In 2019, the City of Long Beach released a working draft of its *Climate Action and Adaptation Plan* (CAAP). This plan includes mitigation and adaptation strategies for the City to address climate impacts and to reduce the city's impacts on climate change by reducing GHG emissions. Priority mitigation actions in the transportation, energy, and waste sectors are presented and include actions such as expanding and improving pedestrian infrastructure, providing access to renewable generated electricity, and ensuring compliance with waste collection programs. The mitigation actions involving energy resources include the following (City of Long Beach 2019c):

- **BE-1:** Provide access to renewable generated electricity.
- **BE-2:** Develop a home energy assessment program.
- **BE-3:** Provide access to energy efficiency financing, rebates, and incentives for building owners.
- **BE-4:** Promote community solar and microgrids.
- **BE-5:** Perform municipal energy audits.

A final draft plan is expected to be released in 2020 and will ultimately be incorporated into the *City of Long Beach General Plan.*

City of Los Angeles

City of Los Angeles General Plan

The *City of Los Angeles General Plan* is a comprehensive, long-term declaration of purposes, policies, and programs for the development of the City of Los Angeles. It sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and meet the existing and future needs and desires of the community while integrating a range of State-mandated elements, including transportation, noise, safety, housing, and conservation. The goals, objectives, or policies from the *City of Los Angeles General Plan* relevant to energy resources are listed in Table 3.5-11.

Table 3.5-11. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 1

Element	Goals and Policies
City of Long Beach General Plan	
Air Quality Element	**Goal 7.0:** Reduce emissions through reduced energy consumption. • **Policy 7.1 Energy Conservation:** Reduce energy consumption through conservation improvements and requirements. *Actions:* o **7.1.1:** Promote the adoption of the best available technology and operational measures for aircraft frequenting Long Beach Airport. o **7.1.2:** Reduce overall energy use in local government facilities. o **7.1.4:** Encourage the incorporation of energy conservation features in the design of all new construction. o **7.1.5:** Encourage the installation of conservation devices and low energy using/water consuming appliances in new and existing development. o **7.1.6:** Encourage energy audits of existing structures, identifying levels of existing energy use, and potential conservation measures. **Goal 8.0:** Educate City residents concerning air quality, energy, and congestion issues, and the need to modify present travel behavior and energy consumption patterns. • **Policy 8.1:** Promote public education programs at the local, subregional, and regional level to encourage residents to modify their behavior to reduce automobile trips. *Actions:* o **8.1.8:** Develop air quality public education programs illustrating the benefits of energy conservation.
Land Use Element	**Goal No. 1:** Implementing Sustainable Planning and Development Practices **Strategy No. 1:** Support sustainable urban development patterns. • **LU Policy 1-1:** Promote sustainable development patterns and development intensities that use land efficiently and accommodate and encourage walking. • **LU Policy 1-2:** Support high-density residential, mixed use and transit-oriented development within the downtown, along transit corridors, near transit stations and at neighborhood hubs. • **LU Policy 1-3:** Require sustainable design strategies to be integrated into public and private development projects. • **LU Policy 1-4:** Require electric vehicle charging stations to be installed in new commercial, industrial, institutional and multiple-family residential

Element	Goals and Policies
	development projects. Require that all parking for single-unit and two-unit residential development projects be capable of supporting future electric vehicle supply equipment. • **LU Policy 1-5:** Encourage resources and processes that support sustainable development for adaptive reuse projects, as well as appropriate infill projects. • **LU Policy 1-6:** Require that new building construction incorporate solar panels, vegetated surface, high albedo surface and/or similar roof structures to reduce net energy usage and reduce the heat island effect. • **LU Policy 1-7:** Encourage neighborhood-serving retail, employment and entertainment destinations in new mixed-use projects to create local, walkable daily trip destinations.
Urban Design Element	**Improved Health and Sustainability** **Strategy No. 5:** Integrate healthy living and sustainable design practices and opportunities throughout Long Beach. • **Policy UD 5-5:** Accommodate space for the use of rooftop solar panels and other forms of renewable energy on buildings, underutilized sites, utility plants, and parking facilities through a simplified permitting process, wherever feasible.
City of Los Angeles General Plan	
Air Quality Element	**Goal 5:** Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting. **Objective 5. 1:** It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments. • **Policy 5.1.2:** Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations. • **Policy 5.1.4:** Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling. **Objective 5.2:** It is the objective of the City of Los Angeles ta have a portion of the City's service fleet be comprised of alternative fuel powered vehicles, subject to availability of funding, and practical feasibility. • **Policy 5.2.1:** Reduce emissions from its own vehicles by continuing scheduled maintenance, inspection and vehicle replacement programs; by adhering to the State of California's emissions testing and monitoring programs; by using alternative fuel powered vehicles wherever feasible, in accordance with regulatory agencies and City Council policies.
Conservation Element	**Goal 1:** A city that preserves, protects and enhances its existing natural and related resources. **Objective:** conserve petroleum resources and enable appropriate, environmentally sensitive extraction of petroleum deposits located within the city's jurisdiction so as to protect the petroleum resources for the use of future generations and to reduce the city's dependency on imported petroleum and petroleum products. • **Policy 1:** continue to encourage energy conservation and petroleum product reuse.

Element	Goals and Policies
Housing Element	**Goal 2:** Safe, Livable, and Sustainable Neighborhoods **Objective 2.3:** Promote sustainable buildings, which minimize adverse effects on the environment and minimize the use of non-renewable resources. • **Policy 2.3.3:** Promote and facilitate reduction of energy consumption in new and existing housing.
Framework Element	**Goal 9M:** A supply of electricity that is adequate to meet the needs of Los Angeles Department of Water and Power electric customers located within Los Angeles. **Objective 9.26:** Monitor and forecast the electricity power needs of Los Angeles' residents, industries, and businesses. • **Policy 9.26.1:** The Los Angeles Department of Water and Power (LADWP) shall continue to monitor and forecast its customers' peak load on its system and identify which parts of the system should be upgraded to accommodate expected growth. **Objective 9.27:** Continue to ensure that all electric power customers will receive a dependable supply of electricity at competitive rates. • **Policy 9.27.1:** The LADWP shall continue to generate or purchase electric power to serve its customers. **Objective 9.28:** Provide adequate power supply transmission and distribution facilities to accommodate existing uses and projected growth. • **Policy 9.28.1:** The LADWP shall continue to plan its power supply capability far enough in advance to ensure that it has available capacity to meet customer demand before it is needed. • **Policy 9.28.2:** The LADWP shall continue to ensure that the City's transmission and distribution system is able to accommodate future peak electric demand for its customers. • **Policy 9.28.3:** The LADWP shall continue to advise the Planning and Building and Safety Departments of any construction project that would overload a part of the distribution system during a period of peak demand. **Objective 9.29:** Provide electricity in a manner that demonstrates a commitment to environmental principals, ensures maximum customer value, and is consistent with industry standards. • **Policy 9.29.1:** Develop and deliver services to attract, assist, and retain industries and businesses in Los Angeles. • **Policy 9.29.2:** Promote the responsible use of natural resources, consistent with City environmental policies. • **Policy 9.29.3:** Promote conservation and energy efficiency to the maximum extent that is cost effective and practical, including potential retrofitting when considering significant expansion of existing structures. • **Policy 9.29.7:** Encourage additional markets for electrical energy, such as environmentally friendly alternative fuel for transportation in electric buses and light-duty vehicles.
City of Los Angeles Community Plans (Land Use Element)	
Boyle Heights	• **LU Goal 26:** New development is designed to minimize impacts to the environment and enhance the health and wellbeing of residents. • **LU Policy 26.2:** Encourage projects to include Leadership in Energy and Environmental Design (LEED) Standards.

Element	Goals and Policies
Canoga Park-Winnetka-Woodland Hills-West Hills	The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan does not contain policies or objectives specifically relevant to energy resources.
Central City	The Central City Community Plan does not contain policies or objectives specifically relevant to energy resources.
Central City North	The Central City North Community Plan does not contain policies or objectives specifically relevant to energy resources.
Encino-Tarzana	The Encino-Tarzana Community Plan does not contain policies or objectives specifically relevant to energy resources.
Hollywood	Other Public Facilities • **Policy 2:** That new equipment for public facilities be energy efficient.
North Hollywood-Valley Village	The North Hollywood-Valley Community Plan does not contain policies or objectives specifically relevant to energy resources.
Northeast Los Angeles	The Northeast Los Angeles Community Plan does not contain policies or objectives specifically relevant to energy resources.
Reseda – West Van Nuys	The Reseda-West Van Nuys Community Plan does not contain policies or objectives specifically relevant to energy resources.
Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass	The Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan does not contain policies or objectives specifically relevant to energy resources.
Silver Lake-Echo Park-Elysian Valley	The Silver Lake-Echo Park-Elysian Valley Community Plan does not contain policies or objectives specifically relevant to energy resources.
Van Nuys-North Sherman Oaks	The Van Nuys-North Sherman Oaks Community Plan does not contain policies or objectives specifically relevant to energy resources.

Sources: City of Long Beach 1996, 2019a, 2019b; City of Los Angeles 1992, 1995, 1996, 1998a–d, 1999a–c, 2000, 2001, 2003, 2004, 2013, 2014; Los Angeles County 2015a.

City of Los Angeles Sustainable City Plan

On April 8, 2015, the City of Los Angeles released its first-ever *Sustainable City pLAn* (pLAn), establishing short- and long-term targets for the City over the next 20 years in 14 categories to strengthen and promote sustainability of the environment, economy, and equity in Los Angeles. On April 29, 2019, the City released Los Angeles' *Green New Deal* as an update to the 2015 pLAn. This updated plan augments, expands, and elaborates in even more detail the City's vision for a sustainable future and assigns accelerated GHG emission reduction targets and new aggressive goals to place the City on the path to a zero-carbon future by 2050. Many of the City's efforts that would be implemented to meet these goals would also reduce energy consumption and increase energy efficiency. The 2019 updates to the pLAn accelerate the following targets (City of Los Angeles 2019):

- Supply 55 percent renewable energy by 2025, 80 percent by 2036, and 100 percent by 2045.
- Source 70 percent of the City's water locally by 2035, and capture 150,000 acre-feet/year of stormwater by 2035.
- Reduce building energy use per square feet for all types of buildings 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050.
- Reduce vehicle miles traveled per capita by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050.

- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025 and 75 percent by 2035.
- Increase the percentage of zero emission vehicles in the city to 25 percent by 2025, 80 percent by 2035, and 100 percent by 2050.
- Create 300,000 green jobs by 2035 and 400,000 by 2050.
- Convert all City fleet vehicles to zero emission where technically feasible by 2028.
- Reduce municipal GHG emissions 55 percent by 2025 and 65 percent by 2035 from 2008 baseline levels, reaching carbon neutral by 2045.

Overall, the updated plan calls for reducing GHGs to 50 percent below 1990 levels by 2025 and to 73 percent below 1990 levels by 2035, and becoming carbon neutral by 2050. By following the 2019 Green New Deal, the City is expected to reduce an additional 30 percent in GHG emissions above and beyond the 2015 pLAn. Aside from committing LADWP to increase their supply of renewable energy, the Green New Deal also includes further commitments for the City to increase cumulative energy by way of local solar, energy storage capacity, and demand-response programs.

Frame 2

In addition to the City of Long Beach and unincorporated County areas, Frame 2 includes the following cities. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Carson

Carson General Plan

The *Carson General Plan*, which was last updated in 2004, provides the framework for all zoning and land use decisions in the city. Applicable goals and policies related to energy resources within the *Carson General Plan* are listed in Table 3.5-12.

City of Carson Climate Action Plan

The City of Carson's *Climate Action Plan*, adopted in 2017, sets a long-term goal of reducing GHG emissions by 49 and 80 percent below 2005 levels by 2035 and 2050, respectively. The *Climate Action Plan* identifies emission reduction strategies, including those involving land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage. Strategies involve identifying ways to reduce automobile emissions, emphasizing energy efficiency, increasing waste diversion, creating carbon sinks, and implementing clean, renewable energy. General goals identified in the plan addressing energy include increasing energy efficiency in both existing and new residential units and commercial developments as well as municipal buildings and city infrastructure, increasing energy efficiency through water efficiency, decreasing energy demand through reducing urban heath island effect, and participating in education, outreach, and planning for energy efficiency (City of Carson 2017).

City of Compton

Compton General Plan

The 2011 *Draft Compton General Plan 2030* has not yet been adopted. Therefore, Compton's 1991 *General Plan Vision 2010* still serves as the blueprint for planning and development in the city and indicates the community's vision for the future. Applicable goals and policies related to energy resources within *General Plan Vision 2010* are listed in Table 3.5-12.

City of Long Beach

Applicable regulations for the City of Long Beach are described above and presented in Table 3.5-11.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-12. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 2

Element	Goals and Policies
Carson General Plan	
Housing Element	**Goal 7.0:** Conservation of natural resources and reduction of energy consumption in all areas of residential development. • **Policy 7.1:** Educate the public in the area of energy conservation. • **Policy 7.2:** Promote the use of alternative energy sources.
Open Space and Conservation Element	**Goal: OSC-3:** Conservation of scarce energy resources. • **Policy OSC-3.1:** Promote incentives for the use of site planning techniques, building orientation, building materials, and other measures which reduce energy consumption. • **Policy OSC-3.2:** Support the development of alternative sources of energy such as roof-mounted solar panels, fuel cells or new technology. • **Policy OSC-3.3:** Work with energy providers to develop and implement programs to reduce electrical demand in residential, commercial and industrial developments.
Transportation and Infrastructure Element	**Goal TI-9:** Promote sustainable energy, communication, and other systems which meet the needs of the community. • **Policy TI-9.1:** Cooperate with the providers of the energy, communication, and other systems in Carson to maintain, improve, expand, and replace (when necessary) these systems throughout the City as good partners. **Goal TI-10:** Provide sustainable civic facilities that are maintained and rehabilitated in a manner that provides an acceptable level of service and is cost-effective. • **Policy TI-10.3:** Rehabilitate public facilities using technologies, methods, and materials which result in energy and water savings, and implement cost effective, long-term maintenance programs.

Element	Goals and Policies
Compton General Plan	
Air Quality Element	**Air Quality Element Goal 4.** Reduce emissions associated with energy consumption. • **Air Quality Element Policy 4.1.** The City of Compton will support the use of energy-efficient equipment and design in City facilities and infrastructure. • **Air Quality Element Policy 4.2.** The City of Compton will encourage incorporation of energy features, including passive solar, in the construction and rehabilitation of new and existing structures. • **Air Quality Element Policy 4.4.** The City of Compton will encourage the use of lower-emission alternate fuels in city-owned vehicles.
Housing Element	**Goal 3**. The City of Compton will support and provide incentives for the maintenance and rehabilitation of the existing housing stock. • **Policy 3.6.** The City of Compton will encourage property maintenance to promote quality design, public safety, and to promote energy conservation.

Sources: City of Carson 2004a, 2004b, 2013; City of Compton 2011.

Frame 3

In addition to the unincorporated County areas, Frame 3 includes the Cities of Compton, Cudahy, Downey, Lynwood, Paramount, and South Gate. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Compton

Applicable regulations for the City of Compton are described above and presented in Table 3.5-12.

City of Cudahy

Cudahy 2040 General Plan

The *Cudahy 2040 General Plan* establishes the basis for zoning regulations, provides guidance in the evaluation of development proposals, and creates the framework for economic development, mobility improvements, and balancing the community's desires regarding sustainability, City services, and parks. Applicable goals and policies related to energy resources within the *Cudahy 2040 General Plan* are listed in Table 3.5-13.

City of Downey

Downey Vision 2025 General Plan

The *Downey Vision 2025 General Plan* serves as a guide to the long-term physical development and growth of the community. Applicable goals and policies related to energy resources within the *Downey Vision 2025 General Plan* are listed in Table 3.5-13.

City of Downey's Energy Action Plan

The 2015 *Energy Action Plan* (EAP) (City of Downey 2015) serves to develop the long-term vision and plan for energy efficiency for the City of Downey. The EAP provides a roadmap for the City of

Downey to reduce GHG emissions through reductions in the energy used in facility buildings and city operations. The following key goals of the EAP are relevant to the proposed Project:

- Meet and exceed the California AB 32 (California Global Warming Solutions Act) energy reduction goals.
- Enhance energy efficiency and operations in existing buildings through systematic commissioning strategies or independent energy efficiency studies.
- Evaluate all suggested energy efficiency action measures presented in the EAP, establish a priority for implementation, and determine possible funding sources.
- Explore the newest "green" technologies and methods to decrease future energy dependency.
- Explore renewable energy recourses (not limited to solar) and possible financing based on available grants/rebates.
- Continue interacting, educating, and informing the community about energy efficiency and greenhouse gas emissions.
- Be an example for energy efficiency and sustainability at City facilities.

The City of Downey's long-term vision for energy efficiency focuses around four primary objectives:

- Reduce the City's carbon footprint and its adverse effect on the environment.
- Conserve energy at the local government facilities.
- Raise energy conservation awareness in local community and improve the quality of life.
- Achieve Platinum Status on the Local Government Agency Partnership.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* contains the plan for the future development and operation of the city. Applicable goals and policies related to energy resources within the *City of Lynwood General Plan* are listed in Table 3.5-13.

City of Paramount

Paramount General Plan

The *Paramount General Plan* serves as the blueprint for planning and development in the city. Applicable goals and policies related to energy resources within the *Paramount General Plan* are listed in Table 3.5-13.

City of South Gate

South Gate General Plan 2035

The *South Gate General Plan 2035* was adopted in December of 2009 and is the primary legal document to guide long-term growth, development, and conservation in the city. Applicable goals and policies related to energy resources within the *South Gate General Plan 2035* are listed in Table 3.5-13.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-13. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 3

Element	Goals and Policies
Cudahy 2040 General Plan	
Air Quality Element	**Goal AQE-3:** Energy efficiency and conservation practices that reduce air pollution and greenhouse gas emissions • **Policy AQE-3.2:** Update the building and development codes to facilitate infrastructure installation supporting electric vehicle technology and alternative fuels, such as electric vehicle charging stations and alternative fuel filling stations. • **Policy AQE-3.6:** Develop energy consumption regulations for public and private development that meet or exceed California Energy Efficiency Standards and California Green Building Standards Codes (Cal Green).
Open Space and Conservation Element	**Goal OSCE-1:** A sustainable urban environment protects valuable natural resources (water, air, and soil) and limits waste production • **Policy OSCE-1.3:** Promote sustainable landscaping practices that help conserve energy and reduce water consumption. • **Policy OSCE-1.4:** Fulfill the Cal Green Building Code's voluntary tiers in constructing public buildings, when feasible. • **Policy OSCE-1.5:** Promote green building practices with respect to recycling material from building demolition and using recycled building materials in new construction. • **Policy OSCE-1.6:** Support efforts to increase the use of renewable energy and low-emission power sources. Encourage the installation and construction of renewable energy systems and facilities such as solar panels.
Downey Vision 2025 General Plan	
Conservation Element	**Goal 4.6.** Conserve energy resources. • **Policy 4.6.1.** Promote the conservation of energy by residents and businesses to conserve energy. • **Program 4.6.1.1.** Provide incentives for people to use renewal energy sources such as solar energy. • **Policy 4.6.2.** Reduce energy consumption by City operations. • Program 4.6.2.1. Ensure the installation of energy efficient street lights and traffic signals. • **Program 4.6.2.2.** Ensure the installation of energy efficient fixtures, computers and appliances at all public buildings.
City of Lynwood General Plan	
Open Space and Conservation Element	**Goal EC-1:** Promote the conservation of energy resources in new and existing developments. • **Policy WR-2.1:** The City shall ensure that energy conservation measures are implemented in all development projects.

Element	Goals and Policies
Paramount General Plan	
Resource Management Element	Resource Management Programs *Energy Conservation*. The City will continue to enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation, and appliances. Energy needs will be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State of California Environmental Quality Act (CEQA) Guidelines. Other measures that would reduce energy consumption during construction and subsequent operation of new development will be encouraged. The City will continue to work with Southern California Edison and the Southern California Gas Company to promote energy conservation.
South Gate General Plan 2035	
Green City Element	**Goal GC 6:** A robust green building program. **Objective GC 6.1:** Increase the use of green techniques in new buildings, new building sites and building remodels and retrofits. • **Policy P.1:** All new municipal buildings should meet or exceed silver in the appropriate LEED Rating System, or a comparable green building standard. • **Policy P.2:** The City should encourage green building techniques efforts in single-family homes as well as in new municipal, commercial, mixed-use or multifamily residential projects. • **Policy P.3:** The City should encourage and create incentives for green building techniques in existing building retrofits as well as new buildings. • **Policy P.5.** New buildings should meet or exceed California Title 24 energy efficiency requirements. • **Policy P.7:** The City should assess all new development's use of green building techniques as a formal stage of design review. • **Policy P.8:** The City may finance energy efficiency retrofits and on-site renewable energy installation through a local assessment district, or provide administrative or financial support in other ways. • **Policy P.9:** On an ongoing basis, city staff should be trained to implement the green building program and to provide advice and expertise about green building to residents, particularly small-scale developers or homeowners that may have less access to green building expertise. **Goal GC 7:** To mitigate against and adapt to climate change. **Objective GC 7.1:** Reduce South Gate's production of greenhouse emissions and contribution to climate change, and adapt to the effects of climate change. • **Policy P.4:** The City will reduce greenhouse gas emissions and adapt to climate change with efforts in the following areas: • **Energy.** Major mitigation and adaptation strategies will include incentivizing renewable energy installation, facilitating green technology and business, and reducing community-wide energy consumption through the strategies described here. • **Buildings.** Major mitigation and adaptation strategies will include green building incentives, assessment of green building techniques as a formal stage of city design review, and development of a green building

Element	Goals and Policies
	ordinance. Adaptation strategies will also include increased water efficiency in buildings. • **Government Operations.** Major mitigation strategies will include green procurement and energy saving in operations and maintenance.
Public Facilities and Services Element	**Goal PF 5:** A water system that meets the projected demand for all users and seeks ways to reduce demand. **Objective PF 5.3:** Promote coordination between land use planning and water facilities and service. • **Policy P.4:** The City will manage energy use for all water facilities and upgrade water system pumps, motors and other devices to improve energy efficiency to reduce costs.

Source: City of Cudahy 2018, City of Downey 2005, City of Lynwood 2003, City of Paramount 2007, City of South Gate 2009.

Frame 4

In addition to the unincorporated County areas, Frame 4 includes the Cities of Bell, Bell Gardens, Commerce, Huntington Park, Maywood, and Vernon. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Bell

City of Bell 2030 General Plan

The *City of Bell 2030 General Plan* (City of Bell 2018) functions as a framework to guide the city's future growth and development plans. Applicable goals and policies related to energy resources within *the City of Bell 2030 General Plan* are listed in Table 3.5-14.

City of Bell Gardens

City of Bell Gardens General Plan 2010

The *City of Bell Gardens General Plan 2010* is a comprehensive, long-range plan meant to guide the city's future growth and development. Applicable goals and policies related to energy resources within the *City of Bell Gardens General Plan 2010* are listed in Table 3.5-14.

City of Commerce

City of Commerce 2020 General Plan

The *City of Commerce 2020 General Plan* is meant to serve as the blueprint for future planning and development in the city. Applicable goals and policies related to energy resources within the *City of Commerce 2020 General Plan* are listed in Table 3.5-14.

City of Huntington Park

City of Huntington Park 2030 General Plan

In 2017, a Focused General Plan Update for the City of Huntington Park was underway. The *City of Huntington Park 2030 General Plan* is meant to serve as a long-range comprehensive plan to regulate land uses and development in the city for the next 10 to 20 years. Applicable goals and policies

related to energy resources with the *City of Huntington Park 2030 General Plan* are listed in Table 3.5-14.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan* is intended to guide and influence long-term planning and development in the city. Applicable goals and policies related to energy resources within the *City of Maywood General Plan* are listed in Table 3.5-14.

City of Vernon

City of Vernon General Plan

The *City of Vernon General Plan* is intended to serve as a guide for the future of the city. Applicable goals and policies related to energy resources within the *City of Vernon General Plan* are listed in Table 3.5-14.

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Table 3.5-14. Applicable Goals and Policies Related to Energy Resources from Cities Located Within Frame 4

Element	Goals and Policies
City of Bell 2030 General Plan	
Land Use and Sustainability Element	**Issue:** To promote sustainability in the planning, design, and construction of new and rehabilitated development throughout the City. • **Land Use and Sustainability Element Policy 9.** The City of Bell shall require ongoing and future land uses to employ sustainable practices to conserve water, waste, energy, and other resources. As part of this policy, new development must conform to current low-impact development requirements and Leadership in Energy and Environmental Design protocols. **Issue:** To promote energy efficiency and conservation in all existing and future development. • **Land Use and Sustainability Element Policy 31.** The City of Bell shall promote energy efficiency and renewable energy strategies in the review of new developments. Examples include, but are not limited to, solar panels, natural lighting, vehicle charging stations, etc. • **Land Use and Sustainability Element Policy 32.** The City of Bell shall collaborate with utility providers to identify new strategies to promote energy and water conservation. The City of Bell shall sponsor periodic meetings with the utility and service providers. • **Land Use and Sustainability Element Policy 34.** The City of Bell shall permit land uses and development that involve the use of alternative fuels and related technology.

Element	Goals and Policies
City of Bell Gardens General Plan	
Housing Element	Energy Conservation Measures • The City of Bell Gardens encourages the incorporation of the state required energy conservation measures as well as the installation of energy conserving appliances, fixtures and other devices into the design of new residential units or rehabilitated units wherever feasible.
Conservation Element	**Policy 2:** The City of Bell Gardens shall, to the extent possible, protect remaining ecological resources and enhance those resources through programs in the Open Space and Recreation Element and the Circulation and Transportation Element. • **Energy Conservation Guidelines.** The City shall enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation and appliances. Energy needs shall be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State CEQA Guidelines and Appendix J of the City CEQA Guidelines. Also, the City shall promote the use of new technologies on energy conservation in new development, as may be appropriate. Other measures that would reduce energy consumption during construction and operation of the structures shall be encouraged.
City of Commerce 2020 General Plan	
Resource Management Element	• **Resource Management Policy 3.1.** The city of Commerce will assist local utility companies with their public education energy conservation programs. • **Resource Management Policy 3.2.** The city of Commerce will encourage public employees to follow energy conservation procedures designed to reduce energy consumption. • **Resource Management Policy 3.4.** The city of Commerce will promote reduced energy consumption by existing land uses within Commerce. • **Resource Management Policy 3.5.** The city of Commerce will cooperate with the Department of Building and Safety to enforce State energy conservation guidelines that require the incorporation of energy-saving designs and features into new and refurbished buildings. • **Resource Management Program – Energy Conservation:** The city shall continue to enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation, and appliances. Energy needs shall be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State of California Environmental Quality Act (CEQA) Guidelines. Other measures that would reduce energy consumption during construction and subsequent operation of new development shall be encouraged. The city will continue to work with Southern California Edison and the Southern California Gas Company to promote energy conservation.

Element	Goals and Policies
City of Huntington Park 2030 General Plan	
Resource Management Element	• **Resource Management Element Policy 4.** The City of Huntington Park shall encourage the use of energy conservation devices in project design and construction to increase energy efficiency and decrease pollution emissions from energy production and use. • **Resource Management Element Policy 9.** The City of Huntington Park shall encourage innovative site planning and building designs which minimize energy consumption by taking advantage of sun/shade patterns, prevailing winds, landscaping, and building materials. • **Resource Management Element Policy 10.** The City of Huntington Park shall establish, update, and implement building code requirements in accordance with State Title 24 energy and low impact development (LID) regulations. • **Resource Management Element Policy 11.** The City of Huntington Park shall promote the use of solar panels as a mean to reduce electricity usage. • **Resource Management Element Policy 12.** The City of Huntington Park shall promote the use of energy-efficient lighting throughout the City.
City of Maywood General Plan	
Conservation Element	The Conservation Element of the City of Maywood General Plan does not contain goals or policies specifically relevant to energy resources. However, the following goal and policy relevant to air quality would also affect energy resources as well: **Goal 3:** Provide for the proper management of natural resources both in the city and region are so that they may be protected for the benefit of present and future residents. • **Policy 3.1.** Develop and enforce local criteria of air and water quality so that the city may reduce its share of these regional problems.
City of Vernon General Plan	
Resources Element	**Goal R-1:** Conserve and protect the region's water and energy resources. • **Policy R-1.2:** Support the use of energy-saving designs and equipment in all new development and reconstruction projects.

Sources: City of Bell 2018; City of Bell Gardens 1995; City of Commerce 2008; City of Huntington Park 2017; City of Maywood 2008; City of Vernon 2015.

Frame 5

Frame 5 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

Frame 6

Frame 6 includes the Cities of Los Angeles and Glendale. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

City of Glendale

Envision Glendale 2040 General Plan

The *City of Glendale 2040 General Plan* is intended to serve as a guide for development in the city. Applicable goals and policies related to energy resources within the *City of Glendale 2040 General Plan* include the following (City of Glendale 2014):

Housing Element

Goal 6 – A City with Housing that is Livable and Sustainable:

- **Policy 6.7:** Continue implementing the Glendale Water and Power's (GWP) energy and water savings programs for residents, which encourage conservation of nonrenewable resources in concert with the use of alternative energy sources and reduce housing costs.
- **Policy 6.8:** Continue providing brochures and technical assistance that promotes the use of energy conservation features in new and existing dwellings.
- **Policy 6.9:** Continue promoting energy and resource efficiency by implementing the City's residential recycling, bulk item collection, household hazardous waste, horse accounts, backyard composting, chopper rebates, Christmas Tree Recycling, electronics recycling, recycling drop-off and worm composting services/programs.
- **Policy 6.10:** Encourage the use of sustainable building practices in residential developments.

City of Glendale Greener Glendale Plan

The City of Glendale adopted a *Greener Glendale Plan* for municipal operations in 2011 and a *Greener Glendale Plan* for community activities in 2012. The purpose of both plans is to address what steps the City of Glendale can take in its community and local government operations to achieve better sustainability and to meet the State's mandated reduction targets for GHG emissions. The plans include strategies in various sectors, including waste, energy, water, transportation, and building design. Both plans identify energy as an important focus area because it has significant potential to reduce GHGs and to allow the City of Glendale to meet its GHG reduction goal. As such, most of the strategies to reduce GHG emissions in the City of Glendale are centered around measures to increase renewable energy and reduce energy consumption (City of Glendale 2011, 2012).

Frame 7

In addition to the unincorporated County areas, Frame 7 includes the Cities of Los Angeles and Burbank. The applicable plans from these cities with policies pertaining to energy resources are discussed below.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

City of Burbank

Burbank2035 General Plan

The *Burbank2035 General Plan* is intended to serve as a guide to City decision-makers on allocating resources and determining the future physical form and character of development in the city. Applicable goals and policies related to energy resources within the *Burbank2035 General Plan* include the following (City of Burbank 2013a):

Land Use Element

Goal 2: Sustainability:

- **Policy 2.6** – Design new buildings to minimize the consumption of energy, water, and other natural resources. Develop incentives to retrofit existing buildings for a net reduction in energy consumption, water consumption, and stormwater runoff.

Open Space and Conservation Element

Goal 10. Energy Resources: Burbank conserves energy, uses alternative energy sources, and promotes sustainable energy practices that reduce pollution and fossil fuel consumption.

- **Policy 10.1**: Incorporate energy conservation strategies in City projects.
- **Policy 10.2**: Promote energy-efficient design features to reduce fuel consumption for heating and cooling.
- **Policy 10.3:** Continue to acquire alternative fuel vehicles like hybrid, natural gas, electric, or hydrogen-powered vehicles when adding to the City's vehicle fleet.
- **Policy 10.4:** Encourage residents and businesses to reduce vehicle use or to purchase alternative fuel vehicles.
- **Policy 10.5:** Promote technologies that reduce use of non-renewable energy resources.
- **Policy 10.6:** Support private sources of sustainable, environmentally friendly energy supplies.
- **Policy 10.7:** Encourage the use of solar energy systems in homes and commercial businesses as a form of renewable energy.

Burbank2035 Greenhouse Gas Reduction Plan

The City of Burbank's climate action plan, *Burbank2035 Greenhouse Gas Reduction Plan*, implements the GHG goals and policies from the Air Quality and Climate Change Element of the *Burbank2035 General Plan* to achieve a communitywide emissions reduction goal of 30 percent by 2035. The *Greenhouse Gas Reduction Plan* identifies emission reduction opportunities within the community, in addition to the incorporation of best practices from other jurisdictions and organizations and State and regional laws, guidance, and recommendations. The plan identifies the primary ways to reduce communitywide GHG emissions in Burbank in five strategy areas: Buildings and Energy, Transportation, Water Conservation, Waste Reduction, and Municipal operations. Measures directed at the Buildings and Energy strategy area to reduce GHG emissions in the City of Burbank involve increasing energy efficiency in existing buildings, enhancing energy performance in new construction, and increasing renewable energy use (City of Burbank 2013b).

Unincorporated County

Applicable regulations for the unincorporated County areas are described above and presented in Table 3.5-10.

Frame 8

Frame 8 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

Frame 9

Frame 9 includes the City of Los Angeles.

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above and presented in Table 3.5-11.

3.5.3 Impact Analysis

This section describes the impacts related to energy for the two Typical Projects, six kit of parts (KOP) categories, and the *2020 LA River Master Plan* in its entirety. It describes the methods used to determine impacts of the proposed Project and lists the thresholds used to conclude whether an impact would be significant. Measures to reduce or avoid significant impacts accompany each impact discussion, where necessary.

3.5.3.1 Methods

State CEQA Guidelines Appendix F

Appendix F of the State CEQA Guidelines states that the evaluation of energy use should be evaluated in an EIR and provides guidance for consideration in this evaluation. While Appendix F does not provide specific thresholds for energy use, it recommends consideration of the following environmental impacts, to the extent relevant and applicable:

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. The effects of the project on peak and base period demands for electricity and other forms of energy.
3. The degree to which the project complies with existing energy standards.
4. The effects of the project on energy resources.
5. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Transportation Fuels

The State CEQA Guidelines, Appendix F, *Energy Conservation*, requires EIRs to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

Driven by high demand from California's many motorists, major airports, and military bases, the transportation sector is the State's largest energy consumer (U.S. Energy Information Administration 2012). The majority of transportation energy is currently derived from a wide variety of petroleum products. Automobiles and trucks consume gasoline and diesel fuel. The transportation sector consumes relatively minor amounts of natural gas or electricity; however, propelled mainly by air quality laws and regulations, technological innovations in transportation are expected to increasingly rely on compressed natural gas and electricity as energy sources. Energy consumption by on-road motor vehicles reflects the types and numbers of vehicles, the extent of their use (often described in terms of vehicle miles traveled), and their fuel economy (typically described in terms of miles per gallon).

Data from the Department of Motor Vehicles show that gasoline demand is largely driven by Light Duty Vehicles, which represent more than 90 percent of all gasoline consumption in California (California Department of Motor Vehicles and California Energy Commission 2016). Gasoline vehicles made up 92 percent of California Light Duty Vehicles in 2015. Gasoline also fuels hybrid vehicles and accounts for more than 95 percent of the fuel used by flexible-fuel vehicles in California. CAFÉ standards provide for significantly improved fuel economy, and the National Highway Traffic Safety Administration estimates that this trend will continue through 2025. Most of the demand for gasoline in California can be attributed to Light Duty Vehicles in the residential sector. Therefore, the slow growth in population, coupled with improvements in fuel economy, explains an overall decline in demand for gasoline. Overall, though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.6 billion gallons in 2017 to between 12.1 billion and 12.6 billion gallons in 2030, a 19 to 22 percent reduction (California Energy Commission 2018).

The two Typical Projects—the Common Elements Typical Project and the Multi-Use Trails and Access Gateways Typical Project—are analyzed in greater detail than the other KOP design components based on the design components for which the County could make reasonable and informed construction and operations assumptions. As discussed in Chapter 2, *Project Description*, of this PEIR, the analysis of the Common Element Typical Project assumes the most extensive footprint of a Tier III pavilion. Based on the assumptions of construction equipment and worker trips provided by the County for the two Typical Projects, it is possible to quantify the demand for transportation fuels used for construction activities. Fuel consumption from onsite heavy-duty construction equipment and offsite vehicles was calculated based on the GHG emissions predicted by the proposed Project's GHG analysis using the CalEEMod model. In particular, the carbon dioxide (CO_2) emissions predicted by CalEEMod were converted into gallons of fuel based on the amount of CO_2 emissions emitted per gallon of combusted gasoline and diesel fuel. Construction worker commute vehicles were assumed to use gasoline, while vendor/delivery and haul trucks were assumed to use diesel. The Climate Registry's 2019 default emission factors for gasoline and diesel (i.e., kilograms CO_2 per gallon) were used to convert the vehicle emissions into fuel consumption.

The energy consumption associated with mobile sources during operation of the two Typical Projects was also estimated using the aforementioned method. Additionally, operational electricity

and natural gas consumption for the Typical Projects was also drawn from the emission modeling performed in CalEEMod to support the GHG analysis. The CalEEMod outputs directly report the natural gas consumption in BTU and the electricity consumption in kWh for the Typical Projects.

The energy consumption calculations for the two Typical Projects are provided in Appendix E, *Energy Calculations*, of this PEIR. Energy consumption associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level.

Because sufficiently detailed information about the location and extent of the components that could be proposed under any of the KOPs is not currently available, it is not possible to calculate exactly what the energy use would be during construction and operations. Accordingly, it is also not possible to determine exactly what effects the proposed Project would have on local and regional energy supplies, energy resources, and on requirements for additional capacity. The analysis in the following discussions does provide information about the regulatory environment and the degree to which the proposed Project complies with existing energy standards.

Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criteria, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.5.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

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

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

3.5.3.3 Impacts and Mitigation Measures

Impact 3.5(a) Would the proposed Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Typical Projects

Common Elements

Construction

Project construction for a Common Elements Typical Project would begin as soon as 2021 and would continue for 10 months. The work would be accomplished over six phases to minimize

disruption to existing operations and the community. Construction would involve up to 20 construction workers per day and may include excavators, dump trucks, backhoes, utility trucks, paving machines, loaders, and small cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours without permission from the local jurisdiction. Project construction would involve a total area of approximately 3 acres for each Common Elements Typical Project. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would be located primarily in the LA River right-of-way (ROW) for County or Los Angeles County Flood Control District projects; nevertheless, dependent on the location and project proponent, staging areas could be located on local jurisdiction properties.

As discussed in Chapter 2, *Project Description*, the analysis of Common Element Typical Projects assumes the most extensive footprint of a Tier III pavilion. Typically, construction activities would not involve the use of natural gas. Accordingly, natural gas would not be supplied to support the proposed Project's construction activities; thus, there would be no demand generated by construction. Additionally, electric construction tools that would be used during project-related construction would be powered from diesel-operated generators at a site rather than by electricity from the power grid. As such, construction activities associated with Common Element Typical Projects would primarily involve onsite energy demand and consumption related to the use of transportation fuels (i.e., diesel and gasoline) for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources.

Based on the construction equipment and activity assumptions used in the air quality analysis (refer to Section 3.2, *Air Quality*), it is estimated that a Common Elements Typical Project is projected to require 32,194 gallons of diesel and 2,094 gallons of gasoline. Because construction emissions are considered to be relatively short-term emissions that would cease once construction of a Common Elements Typical Project is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Trucks and equipment used during proposed construction activities would also be required to comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Aside from reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Anti-idling regulations would limit the amount of fuel wasted in equipment and trucks that are not in operation. Emissions regulations to control pollutant and toxic air contaminant emissions would also require that engines be more efficient, which results in reduced fuel consumption. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. As such, construction activities associated with Common Elements Typical Projects would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts.

Furthermore, as discussed in Section 3.7, *Greenhouse Gas Emissions*, the construction industry is moving toward cleaner fuels and electrified equipment, which would result in fewer pollutant emissions and the technology would provide greater efficiencies in the equipment's energy consumption over time. As such the use of energy during construction of a Common Elements Typical Project would likely decrease over the lifetime of the proposed Project and be lower than what is analyzed in this PEIR.

Overall, construction activities related to a Common Elements Typical Project would comply with relevant energy efficiency standards and not result in a wasteful, inefficient, and unnecessary usage of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

A Common Elements Typical Project, once constructed and operational, could attract up to 500 new daily users and 10 daily full-time employee operations and maintenance staff, resulting in additional demand for energy. Components of a Common Elements Typical Project would require energy for the conveyance of water for landscaping, restrooms, and café uses; electricity for lighting and appliances; and natural gas for appliances. Based upon the calculations conducted for the air quality analysis, a Common Elements Typical Project is anticipated to consume approximately 2,075 million BTU of natural gas, 318 MWh of electricity, and 434,432 gallons of gasoline per year. In addition to the electricity and natural gas required for the operation of the buildings (e.g. electric lighting and natural gas appliances in the pavilions), landscaping equipment and mobile trips generated by a Common Elements Typical Project would require the consumption of gasoline.

Demand for energy may vary slightly depending on climate zone and intensity of use. Projects in Frames 6, 7, 8, and 9, where temperatures are generally higher than on the coastal side of the Santa Monica Mountains, would likely require greater amounts of electricity for cooling. Conversely, projects in Frames 1 and 2 would be expected to demand less electricity due to the cooling effect of coastal breezes. However, all the Common Elements Typical Projects, regardless of where they are located along the LA River, would not be expected to demand substantial amounts of electricity or natural gas. All project-related buildings would be required to conform to California Title 24 standards for energy-efficiency. Further, a Common Elements Typical Project would be required to comply with CALGreen Code and Title 24 for new building structures. As introduced in the regulatory setting section above, Title 24, Part 6 of the California Code of Regulations (also known as the California Building Energy Efficiency Standards) establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient, or unnecessary consumption of energy and enhance outdoor and indoor environmental quality. The current 2019 California Building Energy Efficiency Standards became effective on January 1, 2020, and improve upon the previous 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. CALGreen is a statewide mandatory green building code that applies to the planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires the installation of energy- and water-efficient indoor infrastructure for all new projects by all cities in California.

Additionally, because the *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians, a Common Elements Typical Project would promote non-vehicular modes of travel and reduce the consumption of fuel from passenger vehicles. A Common Elements Typical Project includes installation of bike racks to help promote cyclist trips in place of vehicle trips, and would include improvements such as the striping of bicycle lanes, installing pedestrian-oriented lighting and landscaping, and creating high-visibility crosswalks and pedestrian refuges.

In addition, for specific project development, the *2020 LA River Master Plan* Design Guidelines (Design Guidelines; as described in Chapter 2, Project Description, and included in Appendix B) include provisions to review applicable codes—which may include, but are not limited to, municipal codes, USGBC, LEED, the U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes—and incorporate water, environmental, and construction best practices. The Design Guidelines for the lighting elements also recommend use of LED or a more efficient light source and use of solar-power light fixtures along the river, wherever possible.

The Design Guidelines include the following recommendations with regard to electricity consumption for a Common Elements Typical Project:

- Use renewable energy sources (solar, wind, and water).
- Optimize building orientation for solar exposure, diffused daylight, and passive ventilation.
- Ensure high thermal performance.
- Install energy-efficient appliances.
- Use locally sourced, recycled, and recyclable materials with low embodied energy.
- Install high-albedo roof and paving materials to mitigate heat gain.
- Use green roof and pervious paving.
- Provide fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor).
- Use solar-powered light fixtures along the river wherever possible.
- Use fixtures made with recycled content where possible.
- Ensure fixtures have LED cartridges that are easily replaced.
- Regularly monitor building systems and optimize usage.

These are inclusive of measures pertaining to water and solid waste, but also include measures that are relevant to energy use such as requirements to utilize electric landscaping equipment, Energy Star appliances, electric space and water heating for buildings, and other building energy consumption requirements. Implementation of these Design Guidelines, to the extent feasible, would further serve to minimize additional demand for electricity.

Given compliance with the CALGreen Code and Title 24 Part 6, the operation of a Common Elements Typical Project would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Project construction would begin as soon as 2021 and would continue for 20 months. The work would be accomplished over six phases to minimize existing trail operation and the impacts on the community. Construction would involve 5 to 10 construction workers per day and may include excavators, dump trucks, backhoes, motor graders, hydraulic impact hammers, forklifts, paving machines, and truck-mounted cranes. Construction would occur Monday through Friday with 8-hour days and would comply with local noise regulations. No construction activities would occur outside of permitted hours. Project construction would involve a total area of approximately 24 acres. Based on the anticipated construction phasing, the average daily construction disturbance area would not exceed 0.5 acre per day. Due to the program nature of the proposed Project, staging areas cannot be determined at this time. However, it can be reasonably assumed that staging areas would occur within the LA River ROW for County or Los Angeles County Flood Control District projects; however, dependent on the location and project proponent, staging areas could be located on local jurisdiction properties.

Multi-Use Trails and Access Gateways Typical Projects would have similar construction impacts as identified for Common Elements Typical Projects, although on a somewhat larger scale. Based on the construction equipment and activity assumptions used in the air quality analysis (refer to Section 3.2, *Air Quality*), a Multi-Use Trails and Access Gateways Typical Project is anticipated to utilize 153,681 gallons of diesel and 1,428 gallons of gasoline during construction. Because construction emissions are considered to be relatively short-term emissions that would cease once construction is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Trucks and equipment used during proposed construction activities would also be required to comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. In addition, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements.

As with the Common Elements Typical Projects, construction activities would not involve the use of natural gas. Similarly, the use of electricity would be minimal because diesel-operated generators would power electric construction tools.

In summary, construction of a Multi-Use Trails and Access Gateways Typical Project is anticipated to require minimal use of electricity and natural gas. With the mandatory compliance with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements, the use of construction-related fuels would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, impacts related to energy use would be less than significant during construction.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Multi-Use Trails and Access Gateways Typical Projects, once constructed and operational, could attract up to 1,000 new daily users and 3 daily full-time employee operations and maintenance staff, resulting in the consumption of transportation fuels by visitors and staff. However, the Multi-Use Trails and Access Gateways Typical Projects would not necessarily generate new vehicle trips, as the facilities provided may merely provide an alternative location that is closer for the local community to access outdoor amenities such as bike, equestrian, and pedestrian trails. As with the Common Elements Typical Projects, the Multi-Use Trails and Access Gateways Typical Projects would also accommodate increased biking and pedestrian travel by providing access and connections along the river to adjacent communities and neighborhoods. It should be noted that the Multi-Use Trails and Access Gateways Typical Projects do not include any buildings that would consume electricity or natural gas. While nighttime lighting would be provided at the access gateways and at certain points along the trails, the electricity consumption from such lighting would be minimal as they would only be used during nighttime hours and would be energy-efficient pursuant to Title 24 and CALGreen standards. The Multi-Use Trails and Access Gateways Typical Projects would also have vegetated buffers that would be composed of planted corridors adjacent to pedestrian, bike, equestrian, and multi-use trails as a means of separating high traffic zones from low traffic zones. These vegetated buffers may require the installation of outdoor irrigation systems, which would consume electricity for the delivery of water. Based upon the CalEEMod model calculations conducted for the GHG analysis, a Multi-Use Trails and Access Gateways Typical Project is anticipated to utilize 101 MWh of electricity and 20,947 gallons of fuel.

Similar to the Common Elements Typical Projects, the Multi-Use Trails and Access Gateways Typical Projects would be required to conform to California Title 24 standards for energy-efficiency and the CALGreen Code. In addition, for specific project development, the Design Guidelines include provisions to review applicable codes—which may include, but are not limited to, municipal codes, USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes—and incorporate water, environmental, and construction best practices. The Design Guidelines for the lighting elements also recommend use of LED or a more efficient light source and use of solar-power light fixtures along the river, wherever possible.

Therefore, the operations phase of a Multi-Use Trails and Access Gateways Typical Project would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

Within all frames, the Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of a Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

KOP Categories 1 through 5

Construction

Due to the similarities of the impact analysis for five of the KOP categories during the construction period, the construction impact discussions are combined. The specific location (in-channel or off-channel), configuration and design for the KOP design components has not been determined yet and would depend on numerous factors, including the project proponent and availability of funding. Construction activities for KOP Categories 1 through 5 would be similar to those discussed for the Multi-Use Trails and Access Gateways Typical Projects, above. It is not possible to quantify the specific energy usage that would be required during the construction phase of the KOPs, considering they include a variety of construction activities ranging from trail modifications to development of facilities, habitat corridors, and channel access ramps anywhere in the study area.

As with the Multi-Use Trails and Access Gateways Typical Project, construction activities would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. While there may be more use of construction-related fuels due to the earth-moving and grading associated with the KOPs as compared to the Typical Projects, the equipment used for these earth-moving activities would comply with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements. Therefore, construction of KOP Categories 1 through 5 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 1

Operations

Certain design components of the Trails and Access Gateways KOP inform the Multi-Use Trails and Access Gateways Typical Project, and are analyzed above in detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed below include those listed in Chapter 2, Section 2.5.1.2, *Kit of Parts (KOP)* under *KOP Category 1: Trails and Access Gateways*: equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor.

Due to the passive nature of the uses included within KOP Category 1 (trails, vegetated buffers, and habitat corridors), it is not anticipated that its components would result in a significant use of electricity, natural gas, or transportation fuels. Lighting along the trails would be energy-efficient, pursuant to Title 24 and CALGreen standards. Therefore, operation of KOP Category 1 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

Similar to KOP Category 1, many of the design components would be passive during the operations phase and would not utilize energy resources. The primary difference would be the energy required to power the hydraulic pumps for KOP Category 4. The pumps would be used to remove water from the river and/or put water in the river from adjacent floodplains.

It is anticipated that the hydraulic pumps would be powered with electricity but that they would operate seasonally, primarily during the rainy season. Because the pumps would operate intermittently and only as needed, the energy use impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

Off-channel land assets can be used for projects that are essential to the *2020 LA River Master Plan* but cannot be located in the channel or adjacent ROW. Off-channel land assets include affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks.

Off-channel land asset projects would likely entail greater levels of construction and operation than the other five KOP categories. As with KOP Category 1, it is not possible to quantify the specific energy usage that would be required during the construction phase. Similar to KOP Category 1, construction activities would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. Also, while there may be more use of construction-related fuels associated with KOP Category 6 compared to the other KOP categories, the equipment used for these activities would comply with relevant energy efficiency standards and regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-Fueled Fleets regulation) and federal fuel efficiency requirements. Because the short-term construction emissions would cease once construction activities have been completed, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Therefore, construction of KOP Category 6 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Similar to construction, the operations phase of KOP Category 6 would likely be more intense than for the other KOP categories due to the off-channel land assets. Energy use could include lighting for sports fields, and delivery of water for urban agriculture and nursery operations. However, this KOP

category would also designate space for solar panel installations to promote renewable energy production along the river.

As with the other KOP categories, (where applicable) operations would comply with California Title 24 standards for energy-efficiency. In addition, the project may comply with USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, as feasible. Therefore, the operations phase for KOP Category 6 would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

Construction and Operations

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. These 107 projects are identified in the *2020 LA River Master Plan* in addition to several other planned projects included in other LA River published plans (such as the *2007 LA River Revitalization Master Plan*, the *LA River Ecosystem Restoration Integrated Feasibility Report* and its *Recommended Plan – ARBOR Study*, and the 2017 *Lower LA River Revitalization Plan*). The *2020 LA River Master Plan* includes an opportunity parcel analysis that identifies the 107 projects and the potential opportunities and constraints at sites along the corridor taking into account the LA River ROW, adjacent land assets, and underlying geophysical conditions.

As described in Chapter 2, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large project (150+ acres/10+ miles in size). All of the projects envisioned in the *2020 LA River Master Plan* would improve connectivity across the river, provide new ecological habitat, increase recreation opportunities, and improve flood protection. As the location and extent of projects that could be proposed under any of the KOP categories is unknown at this time, it is not possible to calculate exactly what the energy use would be during construction and operations. However, as discussed above for the two Typical Projects and KOP Categories 1 through 6, each project site would comply with California Title 24 standards and the CALGreen Code for energy-efficiency; in addition, the Design Guidelines recommend that projects consider incorporating requirements of USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-

to-Cradle, and Green Globes codes. Therefore, the overall *2020 LA River Master Plan* implementation would not cause wasteful, inefficient, or unnecessary use of energy.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.5(b) Would the proposed Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Typical Projects

Common Elements

Construction

As discussed above, the energy conservation policies and plans relevant to the entire *2020 LA River Master Plan* include the California Title 24 energy standards, 2019 CALGreen building code, City of Los Angeles Green Building Code, *Los Angeles County General Plan* goals and policies related to energy resources, and all other relevant general plan goals and building codes of the other jurisdictions along the LA River. In addition, where applicable, a Common Elements Typical Project would comply with the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes.

During construction activities, Common Elements Typical Projects would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Based on the above, Common Element Typical Projects would not conflict with adopted energy conservation plans, or violate State or local energy standards.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Common Elements Typical Projects would be required to comply with the CALGreen Code and Title 24. As introduced in the regulatory setting above, Title 24, Part 6 of the California Code of

Regulations (also known as the California Building Energy Efficiency Standards) establishes energy conservation standards for new construction. These standards relate to insulation requirements, glazing, lighting, shading, and water and space heating systems, and are designed to reduce wasteful, uneconomic, inefficient or unnecessary consumption of energy and enhance outdoor and indoor environmental quality.

In addition, as discussed above under Impact 3.5(a), the Design Guidelines include the following recommendations with regard to electricity consumption for a Common Elements Typical Project:

- Utilize renewable energy sources (solar, wind, and water).
- Optimize building orientation for solar exposure, diffused daylight, and passive ventilation.
- Ensure high thermal performance.
- Install energy-efficient appliances.
- Use locally sourced, recycled, and recyclable materials with low embodied energy.
- Install high-albedo roof and paving materials to mitigate heat gain.
- Use green roof and pervious paving.
- Provide fixtures and controls capable of dimming lighting when occupancy loads are low (example: dimmable driver and occupancy sensor).
- Use solar-powered light fixtures along the river wherever possible.
- Use fixtures made with recycled content where possible.
- Ensure fixtures have LED cartridges that are easily replaced.
- Regularly monitor building systems and optimize usage.

These Design Guidelines would further minimize additional demand for electricity, where implemented. In complying with the CALGreen Code and Title 24, the Common Elements Typical Projects would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

As discussed above, the energy conservation policies and plans relevant to the entire *2020 LA River Master Plan* include the California Title 24 energy standards, 2019 CALGreen building code, City of Los Angeles Green Building Code, *Los Angeles County General Plan* goals and policies related to

energy resources, and all other relevant general plan goals and building codes of the other jurisdictions along the LA River. In addition, where applicable, the Multi-Use Trails and Access Gateways Typical Projects would comply with the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, as feasible.

During construction activities, the Multi-Use Trails and Access Gateways Typical Project would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Based on the above, the Multi-Use Trails and Access Gateways Typical Projects would not conflict with adopted energy conservation plans, or violate State or local energy standards. Therefore, project impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

For the same reason provided under *Common Elements*/*Operations* above, the operation of the Multi-Use Trails and Access Gateways Typical Project would not cause with or obstruct a State or local plan for renewable energy or energy efficiency. The reader is referred to the discussion under *Common Elements Typical Project/Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

KOP Categories 1 through 6

Construction

Construction activities for all of the KOP categories would be similar to those discussed for Typical Projects above and would not involve the use of natural gas, and the use of electricity would be minimal because diesel-operated generators would power electric construction tools. And while there may be more use of construction-related fuels due to the earth-moving and grading associated with the KOP categories compared to the Typical Projects, the equipment used for these earth-moving activities would comply with regulations (i.e., CARB's anti-idling and In-Use Off-Road Diesel-

Fueled Fleets regulation) and federal fuel efficiency requirements. Therefore, construction of KOP Categories 1 through 6 would not cause wasteful, inefficient, or unnecessary use of energy. Impacts would be less than significant during construction.

Similar to what was discussed for the Typical Projects, during construction activities, KOP components would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations. Therefore, the proposed Project would not conflict with adopted energy conservation plans, or violate State or local energy standards during the construction phase. Therefore, project impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project, and are analyzed above in more detail. Therefore, for potential impacts of these design components, see above. The design components analyzed in this section include those listed in Chapter 2, Section 2.5.1.2, *Kit of Parts (KOP)* under *KOP Category 1: Trails and Access Gateways*.

Operations

As discussed above, the energy conservation policies and plans relevant to KOP Category 1 include the California Title 24 energy standards, the 2019 CALGreen building code, and the County and City of Los Angeles Green Building codes. As the energy conservation policies are mandatory, the proposed Project would not conflict with applicable plans for renewable energy or energy efficiency. In addition, the proposed Project includes Design Guidelines that state the project components would comply with Title 24, Part 6 Building Energy Efficiency Standards, and local building codes and zoning regulations. With respect to transportation-related energy usage, the proposed Project would comply with the goals of the Southern California Association of Government's (SCAG's) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, and any vehicle trips (e.g., landscaping and maintenance employees) generated during project operations would comply with CAFÉ fuel economy standards.

Based on the above, the proposed Project would not conflict with adopted energy conservation plans, or violate State or local energy standards. Therefore, impacts associated with regulatory consistency would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 2

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 3

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operation*s for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 4

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 5

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Operations

For the same reason as described under KOP Category 1, operation impacts under this KOP category would be less than significant. The reader is referred to the discussion under *KOP Category 1, Operations* for details.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall *2020 LA River Master Plan* Implementation

Construction and Operations

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*. These 107 projects are identified in the Master Plan in addition to several other planned projects included in other LA River published plans (such as the *2007 LA River Revitalization Master Plan*, the *LA River Ecosystem Restoration Integrated Feasibility Report* and its *Recommended Plan – ARBOR Study*, and the *2017 Lower LA River Revitalization Plan*). The *2020 LA River Master Plan* includes an opportunity parcel analysis that identifies the 111 projects and the potential opportunities and constraints at sites along the corridor taking into account the LA River ROW, adjacent land assets, and underlying geophysical conditions.

As described in Chapter 2, *Project Description*, the greatest number of projects (85) anticipated under the *2020 LA River Master Plan* are extra-small and small projects (up to 3 acres), followed by 10 medium projects (3 to 40 acres/5 miles in size), 11 large projects (40 to 150 acres/10 miles in size), and one extra-large projects (150+ acres/10+ miles in size). All of the projects envisioned in the *2020 LA River Master Plan* would improve connectivity across the river, provide new ecological habitat, increase recreation opportunities, and improve flood protection. Because the location and extent of projects that could be proposed under any of the KOP categories is unknown, it is not possible to calculate exactly what the energy use would be during construction and operations. However, as discussed above for the two Typical Projects and KOP Categories 1 through 6, each project site would comply with California Title 24 standards for energy-efficiency as well as municipal codes; in addition the Design Guidelines recommend incorporation of best practices from the USGBC, LEED, U.S. Department of Energy Better Buildings Initiative, Energy Star, Dark Sky, Cradle-to-Cradle, and Green Globes codes, where feasible. The *2020 LA River Master Plan* projects would also comply with Design Guidelines pertaining to energy efficiency, as well as all local building codes and green building standards. Therefore, the overall *2020 LA River Master Plan* implementation would not conflict with adopted energy conservation plans, or violate State or local energy standards.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Cumulative Impacts

The geographic context for an analysis of cumulative impacts related to energy would be the collective geographic area covered by the individual service providers. This would include the service areas for SCE, LADWP, and individual jurisdictions' energy providers. This extends beyond the study area to help accurately identify any existing cumulative condition for energy in the greater County area. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2, *Cumulative Impacts*.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact related to energy, if, in combination with other projects within the greater Los Angeles region, it would result in the wasteful, inefficient, or unnecessary consumption of energy.

Cumulative Condition

Cumulative growth and development in the greater Los Angeles region would result in additional demand, resulting in increased consumption of electricity and natural gas. The anticipated power and natural gas demands for the buildout of the *City of Los Angeles Framework Plan* would be considered to be cumulatively significant in the context of future growth in Los Angeles County. Cumulative electricity demands within the County in 2035 would total about 15.1 billion kilowatt hours per year (15,100 gigawatt hours per year). Cumulative natural gas demands in 2035 would total about 232 million therms per year (61.6 million cubic feet of natural gas per day). These demand projections are within the forecasts for the individual utility providers and these cumulative impacts are considered to be less than significant.

Implementation of the Los Angeles County General Plan and the general plans of individual jurisdictions in the study area, as well as transportation projects included in the 2020 Regional Transportation Plan/Sustainable Communities Strategy, when taken into consideration with other development and infrastructure projects within the SCAG region and surrounding areas, would have the potential to increase the consumptive use of energy, constituting a significant cumulative impact. Therefore, there is a cumulative condition related to energy.

Contribution of the Project to Cumulative Impacts

Construction activities under the Project would rely primarily on diesel-powered generators to produce the electricity required to operate electrical equipment. It is anticipated that the utilities would address demands within their respective service territories, which are under the oversight of the CPUC. Furthermore, the proposed Project would not have a detrimental effect on local and regional energy supplies or requirements for additional capacity. In addition, the proposed Project would not impede a local utility's ability to meet the Project's peak- and base-period demand for electricity and other forms of energy.

Construction activities associated with the Project would be relatively short-term and would represent a relatively minor demand on local and regional fuel supplies that would be easily accommodated. Compliance with anti-idling regulations would further reduce fuel consumption. As such, construction activities associated with the Project would not result in the wasteful, inefficient, or unnecessary use of transportation fuels in meaningful amounts.

During operation of all subsequent projects under the *2020 LA River Master Plan*, each project site would comply with California Title 24 standards and the CALGreen Code for energy-efficiency. The *2020 LA River Master Plan* implementation would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, the proposed Project would not result in cumulatively considerable contributions to impacts on energy supplies.