

5.4 Energy

5.4.1 INTRODUCTION

This section of the EIR assesses the significance of the use of energy, including electricity, natural gas and gasoline, and diesel fuels, that would result from implementation of the proposed Project. It discusses existing energy use patterns and examines whether the proposed Project (including development and operation) would result in the consumption of large amounts of fuel or energy or use such resources in a wasteful manner.

Refer to Section 5.6, *Greenhouse Gas Emissions*, for a discussion of the relationship between energy consumption and greenhouse gas (GHG) emissions, and Section 5.15, *Utilities and Service Systems*, for a discussion of water consumption. The analysis within this section is based on the energy modeling of the Project prepared by Urban Crossroads (UC 2019).

5.4.2 REGULATORY SETTING

Energy Independence and Security Act, Corporate Average Fuel Efficiency Standards

In response to *Massachusetts et al. vs. Environmental Protection Agency et al.*, the Bush Administration issued an executive order on May 14, 2007, directing the U.S. Environmental Protection Agency (USEPA) and the Department of Transportation (USDOT) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law, requiring an increased Corporate Average Fuel Economy (CAFE) standard of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by the 2020 model year.

In addition to setting increased CAFE standards for motor vehicles, the Energy Independence and Security Act includes the following additional provisions:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

Additional provisions of the Act address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.

California Public Utilities Commission Plans and Programs

The California Public Utilities Commission (CPUC) has authority to set electric rates, regulate natural gas utility service, protect consumers, promote energy efficiency, and ensure electric system reliability. The CPUC has established rules for the planning and construction of new transmission facilities, distribution facilities, and substations. Utility companies are required to obtain permits to construct certain power line facilities or substations. The CPUC also has jurisdiction over the siting of natural gas transmission lines.

The CPUC regulates distributed energy generation policies and programs for both customers and utilities. This includes incentive programs (e.g., California Solar Initiative) and net energy metering policies. Net energy metering allows customers to receive a financial credit for power generated by their on-site system and fed back to the utility. The CPUC is involved with utilities through a variety of energy procurement programs, including the Renewable Portfolio Standard program.

In 2008, the CPUC adopted the Long-Term Energy Efficiency Strategic Plan, which is a road map to achieving maximum energy savings in California through 2020. Consistent with California's energy policy and electricity "loading order," the Energy Efficiency Strategic Plan indicates that energy efficiency is the highest priority resource in meeting California's energy needs. The CPUC also adopted energy goals that require all new residential construction in California to be zero net energy by 2020. The zero-net energy goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. In addition to the zero net energy goals for residential buildings by 2020, the CPUC has adopted goals that all new commercial construction in California will be zero net energy by 2030, and 50 percent of existing commercial buildings will be retrofit to zero net energy by 2030.

Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030, thereby doubling energy efficiency within the state. SB 350 makes revisions to the California Renewable Portfolio Standards (RPS) Program and to certain other requirements on public utilities and publicly owned electric utilities. SB 350 also requires local publicly-owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with a statewide goal established by the CPUC and provides incentives for electrification of rail facilities. Local utilities would be required to develop more detailed strategies and incentives for use of renewable energy sources, resulting in an increased demand for renewable energy generation.

SB 350 emphasizes the important role of electric vehicles in California's overall scheme to combat climate change, declaring that "[d]eploying electric vehicles should assist in grid management, integrating generation from eligible renewable energy resources, and reducing fuel costs for vehicle drivers." The bill promotes the development of additional electric vehicle charging infrastructure to encourage greater use of electric cars and requires electrical utilities to include expansion of electrical vehicle charging facilities as part of their strategies and incentives for reducing overall energy consumption.

Assembly Bill 1007 (Pavley, Chapter 371, Statutes of 2005)

Assembly Bill 1007 required the California Energy Commission (CEC) to prepare a state plan (State Alternative Fuels Plan) to increase the use of alternative fuels in California. The Commission prepared the State Alternative Fuels Plan in partnership with the California Air Resources Board and in consultation with other state, federal, and local agencies. The final State Alternative Fuels Plan, published in December 2007, attempts to achieve an 80-percent reduction in greenhouse gas emissions associated with personal transportation, even as California's population increases. Measures proposed that would reduce petroleum fuel use include:

1. Lowering the energy needed for personal transportation by tripling the energy efficiency of on-road vehicles by 2050 through:
 - a. Conventional gas, diesel, and flexible fuel vehicles (FFVs) averaging more than 40 miles per gallon (mpg).
 - b. Hybrid gas, diesel, and FFVs averaging almost 60 mpg.
 - c. All electric and plug-in hybrid electric vehicles (PHEVs) averaging well over 100 mpg (on a greenhouse gas equivalents [GGE] basis) on the electricity cycle.
 - d. Fuel cell vehicles (FCVs) averaging over 80 mpg (on a GGE basis).
2. Moderating growth in per capita driving, reducing today's average per capita driving miles by about 5 percent or back to 1990 levels.

3. Changing the energy sources for transportation fuels from the current 96 percent petroleum-based to approximately:
 - a. 30 percent from gasoline and diesel from traditional petroleum sources or lower GHG emission fossil fuels such as natural gas.
 - b. 30 percent from transportation biofuels.
 - c. 40 percent from a mix of electricity and hydrogen.
4. Producing transportation biofuels, electricity, and hydrogen from renewable or very low carbon-emitting technologies that result in, on average, at least 80 percent lower life cycle GHG emissions than conventional fuels.
5. Encouraging more efficient land uses and greater use of mass transit, public transportation, and other means of moving goods and people.

Title 24 Energy Efficiency Standards and California Green Building Standards

The 2019 California Code of Regulations Title 24 Part 6 becomes effective on January 1, 2020. The new standards focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. The ventilation measures improve indoor air quality, protecting homeowners from air pollution originating from outdoor and indoor sources. CEC indicates that these Title 24 standards will reduce energy consumption by 7 percent for residential buildings and 30 percent for nonresidential buildings compared to the 2016 Title 24 requirements (CEC 2019).

City of Santa Ana General Plan

The City is currently undergoing a comprehensive update to the General Plan. The following goals, objectives, and policies contained in the existing Energy Element are relevant to the proposed Project:

Goal 1: To reduce consumption of non-renewable energy.

Goal 2: To support develop and utilization of new energy sources.

Objective 1.1: Reduce transportation-related energy consumption.

Objective 1.2: Reduce land use related energy consumption.

Objective 1.3: Reduce construction-related energy consumption.

Policies

- Encourage higher densities of housing and office (mixed use) development to relate to areas of higher transportation access and capacity.
- Require and/or provide incentives for energy-efficient subdivision and site planning and building design.

5.4.3 ENVIRONMENTAL SETTING

Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Santa Ana. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. California utilities are experiencing increasing demands that require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and

increase the grid's capacity. SCE is in the process of implementing infrastructure upgrades to ensure the ability to meet future demands. In addition, as described by the Edison International 2018 Annual Report, the SCE electrical grid modernization effort supports implementation of California Senate Bill 32 that requires the state to cut greenhouse gas emissions 40 percent below 1990 levels by 2030 in order to help address global climate change. It describes that in 2018 Approximately 35% of power that SCE delivered to customers in 2018 came from renewable sources (SCE 2018).

The Project site is currently served by the electricity distribution system that exists adjacent to the site along Warner Avenue.

Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Santa Ana and is the principal distributor of natural gas in Southern California. SoCalGas estimates that gas demand will decline at an annual rate of 0.5 percent from 2018 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and conservation savings linked to advanced metering infrastructure (CGEU 2018). The gas supply available to SoCalGas is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources, the Rocky Mountains, and Canada (CGEU 2018). SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035 in its 2018 report (CGEU 2018).

The Project site is currently served by the natural gas distribution system that exists within the roadways that are adjacent to the Project site.

5.4.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicates that a project could have a significant effect if it were to:

- E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

5.4.5 METHODOLOGY

A number of factors are considered when weighing whether a project would use a proportionately large amount of energy or whether the use of energy would be wasteful in comparison to other projects. Factors such as the use of on-site renewable energy features, energy conservation features or programs, and relative use of transit are considered.

According to Appendix F of the CEQA Guidelines, conserving energy is defined as decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Neither Appendix F of the CEQA Guidelines nor Public Resources Code Section 21100(b)(3) offer a numerical threshold of significance that might be used to evaluate the potential significance of energy consumption of a project. Rather, the emphasis is on reducing “the wasteful, inefficient, and unnecessary consumption of energy.”

Construction activities would result in wasteful, inefficient, or unnecessary use of energy if construction equipment is old or not well maintained, if equipment is left to idle when not in use, if travel routes are not planned to minimize vehicle miles traveled, or if excess lighting or water is used during construction activities. Energy usage during project operation would be considered “wasteful, inefficient, and unnecessary” if the

project were to violate federal, state, and/or local energy standards, including Title 24 of the California Code of Regulations, inhibit pedestrian or bicycle mobility, inhibit access to transit, or inhibit feasible opportunities to use alternative energy sources, such as solar energy, or otherwise inhibit the conservation of energy.

5.4.6 ENVIRONMENTAL IMPACTS

IMPACT E-1: THE PROJECT WOULD NOT RESULT IN A POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION.

Construction

Less than Significant Impact. During construction of the proposed Project energy would be consumed in 3 general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site, as well as delivery truck trips;
2. Electricity associated with providing temporary power for lighting and electric equipment; and
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction activities related to the proposed Project would not result in demand for fuel greater on a per-unit-of-development basis than other development projects in southern California. Demolition of the existing buildings and infrastructure that exist onsite would need to be undertaken; however, because much of the demolition materials can be recycled, the demolition needed to implement the proposed Project is not considered to be wasteful. In addition, the extent of construction activities that would occur from implementation of the proposed Project is limited. Construction would occur in three phases over a 27-month period and the demand for construction-related electricity and fuels would be limited to that time frame.

Also, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Additionally, construction contractors are required to demonstrate compliance with applicable California Air Resources Board (CARB) regulations governing the accelerated retrofitting, repowering, or replacement of heavy duty diesel on- and off-road equipment during the City's construction permitting process. Compliance with existing CARB idling restrictions and the use of newer engines and equipment would reduce fuel combustion and energy consumption. The energy modeling shows that the Project construction electricity usage over the 24-month construction period would be approximately 1,674,604 kWh, which is summarized in Table 5.4-1.

Table 5.4-1: Estimated Construction Electricity Usage

Land Use	Proposed Building Square Footage (1,000 SF)	Electricity Usage (kWh)
High Turnover (Sit Down Restaurant)	25.000	19,575
Regional Shopping Center	18.000	14,094
Quality Restaurant	25.000	19,575
Fast Food Restaurant with Drive Thru	10.000	7,830
Fast Food Restaurant without Drive Thru	2.000	1,566
Enclosed Parking Structure w/ Elevator	969.600	759,197
Apartments Mid Rise	1,288.000	852,767
Total Construction Electricity Usage (kWh)		1,674,604.16

Source: Urban Crossroads, 2019.

Also, as shown in Table 5.4-2, construction of the proposed Project is estimated to result in the need for 123,957 gallons of diesel fuel.

Table 5.4-2: Estimated Construction Fuel Consumption

Activity/ Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Demolition (30 days)	Concrete/Industrial Saws	81	1	8	0.73	473	767
	Excavators	158	3	8	0.38	1,441	2,337
	Rubber Tired Dozers	247	2	8	0.40	1,581	2,563
Site Preparation (45 days)	Crawler Tractors	212	4	8	0.43	2,917	7,096
	Rubber Tired Dozers	247	3	8	0.40	2,371	5,768
Grading (30 days)	Crawler Tractors	212	2	8	0.43	1,459	2,365
	Excavators	158	2	8	0.38	961	1,558
	Graders	187	1	8	0.41	613	995
	Rubber Tired Dozers	247	1	8	0.40	790	1,282
	Scrapers	367	2	8	0.48	2,819	4,571
Building Construction (420 days)	Cranes	231	1	8	0.29	536	12,167
	Crawler Tractors	212	3	8	0.43	2,188	49,670
	Forklifts	89	3	8	0.20	427	9,699
	Generator Sets	84	1	8	0.74	497	11,290
	Welders	46	1	8	0.45	166	3,760
Paving (45 days)	Pavers	130	2	8	0.42	874	2,125
	Paving Equipment	132	2	8	0.36	760	1,849
	Rollers	80	2	8	0.38	486	1,183
Architectural Coating (180 days)	Air Compressors	78	1	8	0.48	300	2,914
Construction Fuel Demand (Gallons Diesel Fuel)							123,957

Source: Urban Crossroads, 2019

Table 5.4-3 shows that construction workers would use approximately 291,025 gallons of fuel to travel to and from the Project site. Tables 5.4-4 and 5.4-5 show that approximately 25,976 gallons of fuel would be

used by medium high duty trucks, and 160,174 gallons of fuel would be used for hauling by heavy high duty trucks during construction of the proposed Project.

Table 5.4-3: Estimated Construction Worker Fuel Consumption

Construction Activity	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition (30 days)	15	14.7	6,615	30.73	215
Site Preparation (45 days)	18	14.7	11,907	30.73	387
Grading (30 days)	20	14.7	8,820	30.73	287
Building Construction (420 days)	1,376	14.7	8,495,424	31.76	267,504
Paving (45 days)	15	14.7	9,923	32.59	304
Architectural Coating (180 days)	275	14.7	727,650	32.59	22,327
Total Construction Worker Fuel Consumption					291,025

Source: Urban Crossroads, 2019

Table 5.4-4: Estimated Construction Vendor Fuel Consumption (Medium High Duty Trucks)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Building Construction (420 days)	169	6.9	229,394	8.83	25,976
Construction Medium-Duty Truck Total					25,976

Source: Urban Crossroads, 2019

Table 5.4-5: Estimated Construction Hauling Fuel Consumption (Heavy High Duty Trucks)

Construction Activity	Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor Building Construction (420 days)	169	6.9	229,394	6.23	36,846
Construction Heavy-Duty Truck Total (vendor)					36,846
Demolition Hauling (30 days)	1,254	20	752,400	6.10	123,328
Construction Heavy-Duty Truck Total (Hauling)					123,328
Heavy-Duty Truck Total (Vendor + Hauling)					160,174

Source: Urban Crossroads, 2019

Overall, construction activities would require limited energy consumption, would comply with all existing regulations, and would not use large amounts of energy or fuel in a wasteful, inefficient, or unnecessary manner. Thus, impacts related to construction energy usage would be less than significant.

Operation

Once operational, the residential and retail/restaurant commercial uses would generate demand for electricity, natural gas, as well as gasoline for motor vehicle trips. Operational use of energy includes the heating, cooling, and lighting of building areas, water heating, operation of electrical systems and appliances, parking lot and outdoor lighting, and the transport of electricity, natural gas, and water to the areas where they would be consumed. This use of energy is typical for urban development, and no operational activities or land uses would occur that would result in extraordinary energy consumption. Additionally, the Project includes features to reduce energy consumptions, such as 94 electric vehicle charging stations, energy efficient appliances, and Title 24 compliant lighting and plumbing fixtures.

As detailed in Table 5.4-6, operation of the proposed Project is estimated to result in the annual use of 1,236,920 gallons of fuel.

Table 5.4-6: Estimated Annual Operational Automobile Fuel Consumption

Vehicle Type	Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	17,115,028	525,156	LDA
LDT1	1,319,622	47,996	LDT1
LDT2	6,386,314	250,848	LDT2
MDV	3,409,298	165,242	MDV
LHD1	473,929	34,866	LHD1
LHD2	176,675	12,821	LHD2
MHD	787,462	86,629	MHD
HHD	522,099	81,952	HHD
OBUS	53,262	8,191	OBUS
UBUS	47,012	12,278	UBUS
MCY	150,182	4,042	MCY
SBUS	18,140	2,267	SBUS
MH	28,506	4,632	MH
TOTAL	30,487,528		1,236,920

Source: Urban Crossroads, 2019

In addition, Table 5.4-7 details that operation of the proposed Project would use approximately 29,255,440 thousand British thermal units (kBtu) per year of natural gas, and Table 5.4-8 shows that approximately 12,721,140 kilowatt-hour (kWh) per year of electricity would be used for operation.

Table 5.4-7: Estimated Annual Operational Natural Gas Demand

Natural Gas Demand	kBTU/year
Apartment Mid Rise	13,141,600
Enclosed Parking Structure w/ Elevator	0
Fast Food Restaurant without Drive Thru	518,640
Fast Food Restaurant with Drive Thru	2,593,200
High Turnover (Sit Down Restaurant)	6,483,000
Other Asphalt Surfaces	0
Other Non-Asphalt Surfaces	0

Quality Restaurant	6,483,000
Regional Shopping Center	36,000
Total Natural Gas Demand	29,255,440

Source: Urban Crossroads, 2019.

Table 5.4-8: Estimated Annual Operational Electricity Demand

Electricity Demand	kWh/year
Apartment Mid Rise	4,571,600
Enclosed Parking Structure w/ Elevator	5,681,860
Fast Food Restaurant without Drive Thru	72,960
Fast Food Restaurant with Drive Thru	364,800
High Turnover (Sit Down Restaurant)	912,000
Other Asphalt Surfaces	0
Other Non-Asphalt Surfaces	0
Quality Restaurant	912,000
Regional Shopping Center	205,920
Total Natural Electricity Demand	12,721,140

Source: Urban Crossroads, 2019.

The proposed mixed-use development would be required to meet the current Title 24 energy efficiency standards. The City's administration of the Title 24 requirements and the City's Climate Action Plan includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. Typical Title 24 measures include insulation; use of energy-efficient heating, ventilation and air conditioning equipment (HVAC); solar-reflective roofing materials; energy-efficient indoor and outdoor lighting systems; reclamation of heat rejection from refrigeration equipment to generate hot water; and incorporation of skylights, etc. In complying with the Title 24 standards, impacts to peak energy usage periods would be minimized, and impacts on statewide and regional energy needs would be reduced. All development is required to comply with the adopted California Energy Code (Code of Regulations, Title 24 Part 6).

The Project would consist of an urban infill redevelopment that would provide mixed residential and commercial (retail/restaurant) uses. Since it would be undertaken on a currently developed and underutilized site, and would be located near existing off-site employment, commercial, residential, and retail destinations and in proximity to existing public bus stops and freeways, which would result in reduced vehicle trips and Vehicle Miles Traveled (VMT) in comparison to a Project of similar size and land without close access to employment, service, and retail, destinations; in addition to public transit and freeways.

The California Air Pollution Control Officers Association (CAPCOA) has provided guidance for mitigating or reducing transportation-related VMT from land use development projects within its guidance document titled *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010). The land use characteristics of the Project are consistent with the CAPCOA guidance related to a reduction of vehicle trip distances that would achieve a reduction in associated transportation-related fuel demand, as described below.

- **Area Density:** CAPCOA identifies that increases in area density, measured in terms of persons, jobs, or dwelling units per unit area, reduces VMT associated with transportation¹, as it reduces the

¹ CalEEMod, by default, assumes that trip distances in the South Coast Air Basin (SCAB) are slightly longer than the statewide average. This is because the commute patterns in the SCAB involve a substantial portion of the population commuting relatively far distances, which is documented in the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which shows that in existing and future plan conditions, more than 50 percent of

distance people travel for work or services and provides a foundation for the implementation of other strategies such as enhanced transit services (CAPCOA guidance measure LUT-1). According to CAPCOA, the reduction in VMT from increases in area density applies to urban and suburban settings for residential, retail, office, industrial, and mixed-use projects. The Project would provide both residential, retail/restaurant, and employment uses and is located in an urban infill location near other employment opportunities, services, and retail commercial and development. The proposed Project would provide an increase in area residential density and an improvement to the jobs-housing balance. As detailed in Section 5.11, *Population and Housing*, the Project region has an existing and projected future imbalance between the number of jobs and housing units, and per CAPCOA guidance, the addition of residential units within the area would reduce VMT and the VMT-related fuel demand. Therefore, the Project is consistent with infill development that increases area density as described by CAPCOA. Thus, based on the CAPCOA guidance the Project would not result in wasteful, inefficient, or unnecessary use of fuel, and impacts would be less than significant.

- **Location Efficiency:** Location efficiency describes the location of a project relative to the type of urban landscape such as an urban area, compact infill, or suburban center. CAPCOA guidance measure LUT-2.22 describes that a reduction in VMT and the related use of energy occurs from development within urban areas that include residential, retail, office, industrial, mixed-uses, and transportation access. As described previously, the Project is located in an urban infill location and would provide residential units near employment, retail, and services that would provide for efficient use of transportation energy. The Project site location also provides for efficient energy use to access existing freeways (that include I-5 and SR-55), a regionally serving arterial roadway (Red Hill Avenue), and the Orange County Transit Authority bus lines that runs along Red Hill Avenue and Warner Avenue.

In addition, the site is surrounded by sidewalks and is within walking and bicycling distance of various existing and planned retail services, such as groceries, restaurants, banks, entertainment, and recreation facilities. According to the CAPCOA guidance, factors that contribute to VMT reductions include pedestrian connectivity between the project site and off-site destinations. The Project would include onsite sidewalks that would connect to the existing offsite sidewalks, and bicycle lanes exist in the Project vicinity. Both walking and bicycling to onsite or nearby destinations would reduce transportation energy use. Thus, the Project site location provides efficient use of transportation energy supplies and is consistent with policies for reducing VMT. Thus, the Project would not result in wasteful, inefficient, or unnecessary use of fuel, and impacts would be less than significant.

In addition, the Project site is within an area where existing infrastructure would provide for efficient delivery of electricity and natural gas to the Project and the Project would not inhibit the development of other alternative energy sources. Furthermore, other existing and future regulations are likely to result in more efficient use of all types of energy, and reduction in reliance on non-renewable sources of energy. These include the federal Energy Independence and Security Act, the state Long Term Energy Efficiency Strategic Plan, SB 350 and AB 1007 (described above), which are designed to reduce reliance on non-renewable energy resources and reduce demand by providing federal tax credits for purchasing fuel-efficient items and improving the renewable fuel, appliance, and lighting standards. Thus, operation of the proposed Project would not use large amounts of energy or fuel in a wasteful, inefficient, or unnecessary manner, and impacts would be less than significant.

all work trips are 10 miles or longer (SCAG, Performance Measures Appendix, page 13, 2016). Thus, work trips that would be less than 10 miles would assist in meeting the 2016 RTP/SCS goal of reducing overall VMT in the region.

IMPACT E-2: THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY.

No Impact. As described previously, the proposed Project would be required to meet the CCR Title 24 energy efficiency standards in effect during permitting of the Project. The City's administration of the CCR Title 24 requirements includes review of design components and energy conservation measures that occurs during the permitting process, which ensures that all requirements are met. In addition, the Project would not conflict with or obstruct opportunities to use renewable energy, such as solar energy. Redevelopment of the site would not result in obstruction of opportunities for use of renewable energy. Thus, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would not occur.

5.4.7 CUMULATIVE IMPACTS

The geographic context for analysis of cumulative impacts regarding energy includes past, present, and future development within southern California because energy supplies (including electricity, natural gas, and petroleum) are generated and distributed throughout the southern California region.

All development projects throughout the region would be required to comply with the energy efficiency standards in the Title 24 requirements. Additionally, some of the developments could provide for additional reductions in energy consumption by use of solar panels, sky lights, or other LEED type energy efficiency infrastructure. With implementation of the existing energy conservation regulations, cumulative electricity and natural gas consumption would not be cumulatively wasteful, inefficient, or unnecessary.

Petroleum consumption associated with the proposed mixed uses would be primarily attributable to transportation, especially vehicular use. However, state fuel efficiency standards and alternative fuels policies (per AB 1007 Pavely) would contribute to a reduction in fuel use, and the federal Energy Independence and Security Act and the state Long Term Energy Efficiency Strategic Plan would reduce reliance on non-renewable energy resources. For these reasons, the consumption of petroleum would not occur in a wasteful, inefficient, or unnecessary manner and would be less than cumulatively considerable.

5.4.8 EXISTING STANDARD CONDITIONS AND PLANS, PROGRAMS, OR POLICIES

The following standard regulation would reduce potential impacts related to energy:

- California Energy Code (Code of Regulations, Title 24 Part 6).

5.4.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements, Impacts E-1 and E-2 would be less than significant.

5.4.10 MITIGATION MEASURES

Impacts related to energy would be less than significant and no mitigation measures are required.

5.4.10 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts related to energy would be less than significant.

REFERENCES

California Air Pollution Control Officers Association Quantifying Greenhouse Gas Mitigation Measures, 2010. Accessed at: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

California Energy Commission 2019 Title 24 Building Energy Standards (CEC 2019). Accessed: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>

California Gas and Electric Utilities 2018 California Gas Report (CGEU 2018). Accessed: <https://www.socalgas.com/regulatory/cgr.shtml>.

Edison International 2018 Annual Report (SCE 2018). Accessed: <https://www.edison.com/home/investors/sec-filings-financials/annual-reports.html>

Southern California Edison. Accessed: <http://sce.com/wps/portal/home/about-us/reliability>.