3.13 ENERGY CONSUMPTION

CEQA provides that an environmental impact report shall include a detailed statement identifying all significant effects on the environment of a proposed project, and mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy" (California Public Resources Code, Section 21100(b)(1),(3)).

Appendix F of the CEQA Guidelines, Energy Conservation, includes recommendations for information that should be included in an EIR to "assure that energy implications are considered in project decisions" (14 CCR 15000 et seq.). Appendix F directs that EIRs should include "discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy (see Public Resources Code section 21100(b)(3))" (14 CCR 15000 et seq.).

Appendix F of the CEQA Guidelines lists potential energy impacts that may be relevant to the Energy Conservation analysis in an EIR. Where a listed item is applicable or relevant to a proposed project, the EIR should consider it. This analysis applied the following relevant listed items from Appendix F, subdivision (II)(F)(C), to the discussion of impacts: energy requirements and energy use efficiencies of the project by fuel type and amount for each stage of the project, 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, compliance with existing energy standards, the effects of the project on energy resources, and the project's projected transportation energy use requirements and overall use of efficient transportation alternatives.

In accordance with Appendix F, this EIR includes relevant information and analyses that address the energy implications of the project. This section presents a summary of the project's anticipated energy needs, impacts, and conservation measures. The project's energy needs have been estimated using the California Emissions Estimator Model (CalEEMod) outputs presented in Appendix C of this EIR. This emissions model contains typical electricity use and natural gas use for a range of land uses, as well as estimates for the number of vehicle trips that may be associated with construction and operation of the proposed project. The CalEEMod outputs also contain estimates for the energy consumption and vehicle trips associated with the existing commercial uses on the project site. This section summarizes the energy use estimates of the proposed project and compares them to those of the existing on-site land uses, to regional and local supply and demand under existing conditions, and to regional and local supply and demand that has been forecasted for the future.

3.13.1 Environmental Setting

The proposed project, including vehicular trips to and from the project, would result in the consumption of energy in a variety of forms, namely electricity, natural gas, and petroleum. Appendix F of the CEQA Guidelines, Part II, Section B, states that the "Environmental Setting may include existing energy supplies and energy use patterns in the region and locality." Consistent with this recommendation, this subsection characterizes existing energy supplies and energy use patterns for electricity, natural gas, and petroleum.

Electricity

According to the CEC's *California Energy Demand Updated Forecast 2015–2025*, California used approximately 280,536 gigawatts per hour of electricity in 2014 (CEC 2016a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency standards and efficiency and conservation programs, California's per capita electricity use has remained stable for more than 30 years, while the national average has steadily increased (CEC 2011).

Southern California Edison (SCE) provides electricity to West Hollywood residents and businesses, including those located on the project site. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. SCE administers various energy efficiency and conservation programs that may be available to residents, businesses, and other organizations in West Hollywood (City of West Hollywood 2011a). According to the CPUC, approximately 76 billion kilowatt-hours (kWh) of electricity were used in SCE's service area in 2014. Demand forecasts anticipate that approximately 75 billion kWh of electricity will be used in SCE's service area in 2020 (CPUC 2016).

SCE receives electric power from a variety of sources. According to CPUC's 2016 Biennial RPS Program Update, 23.2% of SCE's power came from eligible renewables, such as biomass/waste, geothermal, small hydroelectric, solar, and wind sources during the 2014–2016 compliance period (CPUC 2016). This is an increase from the 19.9% that SCE maintained for the 2011–2013 compliance period (CPUC 2014). The California Energy Commission estimates that about 26% of the state's electricity retail sales in 2015 came from renewable energy (CEC 2016b). The RPS Program establishes a goal for California to increase the amount of electricity generated from renewable energy resources to 20% by 2010 and to 33% by 2020. Recent legislation revised the current RPS target for California to obtain 50% of total retail electricity sales from renewable sources by 2030, with interim targets of 40% by 2024, and 45% by 2027 (CPUC 2016).

Within Los Angeles County, annual non-residential electricity use is approximately 49 billion kWh per year, as reported by the state's Energy Consumption Data Management System for 2014 (ECDMS 2016). More specifically, within the City of West Hollywood, annual electricity consumption (encompassing both residential and non-residential) is approximately 335,380,279 kWh (SCE 2009, as cited in City of West Hollywood 2010). Existing electricity use at the project site is estimated to be approximately 1,364,759 kWh per year (Appendix C). Currently, there is an existing underground electrical conduit located in Robertson Boulevard per electrical plans received by SCE. It is anticipated that the proposed project would obtain electrical service from this existing conduit.

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,417.5 trillion Btu of natural gas in 2014 (EIA 2016a). By sector, industrial uses utilize 35.9% of the state's natural gas, followed by 35.5% for electric power, 16.9% for residential uses, 10.1% for commercial uses, and 1.6% for transportation uses (EIA 2016a). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (CEC 2016c). Gas supplies are generally imported via pipelines from the Southwest, the Rocky Mountains, and Canada.

The Southern California Gas Company (SoCalGas) provides the City with natural gas service. SoCalGas' service territory encompasses approximately 20,000 square miles and more than 500 communities. A SoCalGas service yard is within the City limits, adjacent to the West Hollywood Gateway Center (City of West Hollywood 2011a). In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas' service territory. As of 2012, approximately 7,357 million therms[1] were used in SoCalGas' service area per year. Around the time of project building in 2020, natural gas demand is anticipated to be approximately 7,388 million therms per year in SoCalGas' service area (CEC 2014). The total capacity of natural gas available to SoCalGas in 2016 is estimated to be 3.9 billion cubic feet per day. In 2020, the total capacity available is also estimated to be 3.9 billion cubic feet per day[2] (California Gas and Electric Utilities 2016). This amount is approximately equivalent to 3.98 billion thousand British thermal units kBTU per day or 39.8 million therms per day. Over the course of a year, the available capacity would therefore be 14.5 billion therms per year, which is well above the existing and future anticipated natural gas demand in SoCalGas' service area. Within the City of West Hollywood, annual natural gas consumption is approximately 16,940,221 therms (SoCalGas 2009, as cited in City of West Hollywood 2010). Existing natural gas use at the project site is estimated to be 4,692,471 kBTU

[1] One Therm is equal to 100,000 Btu or 100 kBtu.

[2] One cubic foot of natural gas has approximately 1,020 BTUs of natural gas or 1.02 kBTUs of natural gas.

per year. This is approximately equal to 46,925 therms per year. Currently, there is an existing 1-inch gas main in La Peer Drive and an existing 3-inch gas main in Robertson Boulevard per as-built plans received by the City of West Hollywood and referenced on plans received by Southern California Edison. It is anticipated that the proposed project would take its natural gas service from the existing 3-inch gas main in Robertson Boulevard.

Petroleum

Transportation accounts for nearly 40 percent of California's energy consumption according to the California Energy Commission (CEC 2013). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. According to the U.S. Energy Information Administration, California used approximately 629 million barrels of petroleum in 2014 (EIA 2016b). This equates to a daily use of approximately 1.7 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 72 million gallons of petroleum per day, adding up to an annual consumption of 26 billion gallons of petroleum.

By sector, transportation accounts for 86.7% of California's petroleum consumption, followed by 11.6% for industrial uses, 1.0% for commercial, 0.8% for residential, and 0.02% for electric power uses (EIA 2016b). Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. Production of petroleum in the United States was 15 million barrels per day in 2015, which equates to 630 million gallons per day (EIA 2015a). California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 3.13.2, below. As such, the California Energy Commission anticipates an overall decrease of gasoline demand in the state over the next decade.

3.13.2 Relevant Plan, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon for new passenger cars and 23.5 miles per gallon for new light trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the act includes other provisions related to energy efficiency:

- Renewable fuel standard (RFS) (Section 202)
- Appliance and lighting efficiency standards (Sections 301–325)
- Building energy efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum (Section 202, RFS). The EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007 (EISA), the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces (EPA 2015).

Additional provisions of the EISA 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."

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish carbon dioxide (CO_2) emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. The rule includes state-specific CO_2 goals reflecting the CO_2 emission performance rates and guidelines for the development, submittal, and implementation of state plans that establish emission standards or other measures to implement the CO_2 emission performance rates. Initial plan compliance with state emission goals begins in 2022 with full compliance with final goals required in 2030. The goals are established by state in units of pounds of CO_2 per net megawatt-hour (MWh) or total short tons of CO_2. For California, the goals for 2030 are 828 pounds of CO_2 per net megawatt-hour or 96.8 million short tons of CO_2. CARB anticipates that the state's plan will rely heavily on existing programs such as the cap-and-trade program, Renewable Portfolio Standard, energy efficiency standards, and Mandatory GHG Reporting Regulation (for compliance determinations) (CARB 2015).

Concurrently, EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil fuel-fired electric utility generating units. Separate standards of performance were set for fossil fuel-fired electric utility steam-generating units and fossil fuel-fired stationary combustion turbines. The standards apply to new units commencing construction after January 8, 2014, or existing units commencing modification or reconstruction after June 18, 2014. The rule applies only to units with a base load rating greater than 250 million Btu of fossil fuel per hour and serving a generator or generators capable of selling greater than 25 MW of electricity to a utility power distribution system. Implementation of the Clean Power Plan has been stayed by the US Supreme Court pending resolution of several lawsuits.

EPA and NHTSA Joint Rule for Vehicle Standards

On April 1, 2010, the EPA and the NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA promulgated the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA promulgated CAFE standards under the Energy Policy and Conservation Act. This

final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of the President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy. The final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA and NHTSA 2010).

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (EPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through improvements in air-conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The first phase of the CAFE standards (for model years 2017 to 2021) are projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cell vehicles
- Incentives for hybrid technologies for large pickups and for other technologies that achieve high fuel economy levels on large pickups
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standards' test procedures

State

Title 24 of the California Code of Regulations

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Energy consumption by new buildings in California is regulated by the State Building Energy Efficiency Standards, included in Title 24. The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in Title 24 guidelines. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficiency technologies and methods. The premise for the standards is that energy-efficient buildings require less electricity, natural gas, and other fuels. The Title 24, Part 6, standards are updated every three years. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, will become effective on January 1, 2017. The previous amendments were referred to as the 2013 standards and are currently effective. The 2013 standards are 21.8% and 16.8% more efficient for electricity and natural gas in non-residential construction as compared to the 2008 standards. The project will comply with Title 24 Part 6 per state requirements.

Title 24 also includes Part 11, known as California's Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011, and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The mandatory standards require:

- 20% mandatory reduction in indoor water use
- 50% of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The project will comply with Title 24 Part 11 per state requirements.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented per the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements through more strict water conservation, 65% diversion of construction and demolition waste, 10% recycled content in

building materials, 20% permeable paving, 20% cement reduction, and cool/solar reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements through even more strict water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 30% cement reduction, and cool/solar reflective roofs.

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds CO_2 per megawatt-hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact; and
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (EPS) (Perata, Chapter 598, Statutes of 2006).

Assembly Bill 1493

Adopted in 2002 by the state legislature, AB 1493 ("Pavley" regulations) required that the CARB develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions."

The EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009,

CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles.

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency and reducing motorists' costs.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2-equivalent (CO_2E) grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Senate Bill 375

In August 2008, the legislature passed, and on September 30, 2008, Governor Schwarzenegger signed, Senate Bill (SB) 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a SCS within their RTP. The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375

provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or alternative planning strategy.

In September 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the SCAG are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a SCS is the responsibility of the metropolitan planning organizations. SCAG prepared its RTP/SCS, which was adopted by the SCAG Regional Council on April 4, 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035. On June 4, 2012, the CARB executive officer issued an executive order accepting SCAG's quantification of GHG reductions and the determination that the SCS would achieve the GHG emission reduction targets established by CARB. On April 7, 2016, SCAG adopted the 2016–2040 RTP/SCS which looks to build on the success of the 2012–20135 RTP/SCS. Targets for SCAG region in the updated plan includes an 8% per capita reduction in GHG emissions from automobiles and light trucks by 2020, an 18% reduction by 2035, and a 21% reduction by 2040 compared with 2005 levels (SCAG 2016).

Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM, and NO_x emissions from existing diesel vehicles operating in California. Amendments to this regulation were approved by CARB on April 25, 2014.

The regulation applies to nearly all diesel fueled, dual-fueled, or alternative diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned and for privately and publicly owned school buses. The purpose of this regulation is to reduce emissions of diesel PM, NO_x, and other criteria pollutants from in-use diesel-fueled vehicles.

Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Starting January 1, 2012, heavier trucks were required to meet the engine model year schedule shown in Table 4.14-1. Fleets that comply with the schedule must install the best available PM filter on 1996 model year and newer engines and replace the vehicle 8 years later. Trucks with 1995 model year and older engines must be replaced starting in 2015. Replacements with a 2010 model year or newer engines meet the final requirements, but owners can also replace with used trucks that have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023, all trucks and buses

must have 2010 model year engines with few exceptions. No reporting is required if complying with this schedule (CARB 2014).

Table 3.13-1
Compliance Schedule by Engine Model Year for Vehicles with a GVWR 26,000 Pounds or Less

Engine Model Year	Requirements for Heavier Trucks from January 1
Pre-1994	No requirements until 2015, then 2010 engine or better
1994–1995	No requirements until 2016, then 2010 engine or better
1996–1999	PM filter from 2012 to 2020, then 2010 engine or better
2000–2004	PM filter from 2013 to 2021, then 2010 engine or better
2005–2006	PM filter from 2014 to 2022, then 2010 engine or better
2007–2009*	No requirements until 2023, then 2010 engine or better
2010*	Meets final requirement

Source: CARB 2014
* Must have had a PM filter by January 1, 2014, if not originally equipped.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB will propose new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The zero-emissions vehicles (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced technology vehicles as they come to the market.

Executive Order B-16-12

Governor Brown issued Executive Order S-16-12 on March 23, 2012. The Executive Order requires that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It orders CARB, the CEC, the CPUC, and other relevant

agencies work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve the following by 2015:

- The state's major metropolitan areas will be able to accommodate ZEVs, each with infrastructure plans and streamlined permitting
- The state's manufacturing sector will be expanding ZEV and component manufacturing
- The private sector's investment in ZEV infrastructure will be growing
- The state's academic and research institutions will be contributing to ZEV research, innovation and education.

CARB, the CEC, and CPUC, are also directed to establish benchmarks to help achieve the following goals by 2020:

- The state's ZEV infrastructure will be able to support up to one million vehicles
- The costs of ZEV will be competitive with conventional combustion vehicles
- ZEVs will be accessible to mainstream consumers
- There will be widespread use of ZEVs for public transportation and freight transport
- Transportation sector GHG emissions will be falling as a result of the switch to ZEVs
- Electric vehicle charging will be integrated into the electricity grid
- The private sector's role in the supply chain for ZEV component development and manufacturing will be expanding.

Benchmarks are also to be established to help achieve the following goals by 2025:

- Over 1.5 million ZEVs will be on California roads and their market share will be expanding
- Californians will have easy access to ZEV infrastructure
- The ZEV industry will be a strong and sustainable part of California's economy
- California's clean, efficient vehicles will annually displace at least 1.5 billion gallons of petroleum fuels.

On a statewide basis, the Executive Order establishes a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

Cap-and-Trade Program

To achieve the goals of AB 32, the *Climate Change Scoping Plan: A Framework for Change* included an early action to develop a California cap-and-trade program that links with other

Western Climate Initiative partner programs to create a regional market system. The cap-and-trade regulation, which is a key element of California's climate plan, took effect in January 2012 and compliance obligation began in January 2013. The cap-and-trade program sets a statewide limit on sources responsible for 85% of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest-cost options to reduce emissions. The first phase of the cap-and-trade regulation included electricity generated in and imported into California, large combustion sources (i.e., generally those emitting more than 25,000 MT CO_2E per year), and certain industrial sectors. The second phase added providers of transportation fuels and other combustion fuels (e.g., natural gas, propane) to the cap-and-trade program. The regulation requires that emissions generated by these facilities and combustion of fuels be reduced over time under a declining "cap."

Renewable Energy Sources

Established in 2002 under SB 1078, and accelerated by SB 107 (2006) and SB 2 (2011), California's Renewables Portfolio Standard obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33% of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal, landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

According to CPUC's 2016 Biennial RPS Program Update, 23.2% of SCE's power came from eligible renewables during the 2014–2016 compliance period (CPUC 2016). By 2020, SCE is required to produce 33% of its electricity from renewable sources. This represents the off-site renewable sources available to the project through electricity provided by SCE.

Local

City of West Hollywood General Plan 2035 Infrastructure, Resources, and Conservation

The Infrastructure, Resources, and Conservation Element of the West Hollywood General Plan 2035 (City of West Hollywood 2011a) addresses topics pertinent to this section of the EIR, including energy supply and conservation, green building, water supply and conservation, recycling and solid waste, and transportation infrastructure. The element establishes policies intended to foster energy conservation and efficiency. Policies from this element that are relevant to the proposed project are listed below. While some of these policies primarily address City-wide actions or actions that would be taken by the City as opposed to the developer or owner of a specific project, the collection of these policies as a whole encourages and facilitates an environment in which energy conservation is a priority.

- **Policy IRC-2.3:** Require that development projects pay for their share of the costs of improvements to water, gas, power and other utilities that they necessitate.
- **Policy IRC-2.4:** On an ongoing basis, share information on projected growth in jobs and housing with service providers and regional agencies to ensure that there is sufficient infrastructure capacity to support future population growth in the City.
- **Policy IRC-3.1:** Allow for construction of new development only when there is sufficient water to supply that development, as determined by the service provider.
- **Policy IRC-3.6:** Require all new buildings to meet the following standards:
    - Achieve a reduction of water use of 40% less than baseline for buildings as calculated by the Energy Policy Act of 1992.
    - Reduce water consumption for outdoor landscape irrigation, consistent with the most recent City policy (see Chapter 15.52, Water Conservation Plan, in the City's Municipal Code).
    - Comply with all prevailing state laws and City regulations regarding indoor and outdoor water conservation and efficiency in new construction.
- **Policy IRC-3.7:** Encourage existing residential and non-residential buildings to pursue strategies for water conservation, including:
    - Drought-tolerant landscaping
    - Drip irrigation systems for landscaping where appropriate
    - Low-flow fixtures in bathrooms and kitchens

- **Policy IRC-4.1:** Promote building energy efficiency improvements through strategies that may include the following:
  - Retrofits of existing buildings with energy efficiency technology
  - Expanded public outreach in partnership with Southern California Edison on energy efficiency upgrades
  - A voluntary energy audit program for residents and businesses
  - Diverse incentives for energy efficiency
- **Policy IRC-4.2:** Promote land use patterns and mobility decisions that result in reduced vehicle trips and therefore reduced overall energy use from the transportation sector.
- **Policy IRC-4.3:** Maximize the use of renewable energy in the City through strategies that may include the following:
  - A comprehensive renewable energy program that provides incentives, outreach, financing, or similar forms of assistance to residents and businesses in the City
  - Incentives to encourage commercial properties to develop solar energy production systems on private property and sell the energy to the public utility system
- **Policy IRC-4.4:** As feasible, coordinate with available energy efficiency and conservation programs – such as those administered by Southern California Edison, the United States Department of Energy, or other organizations – to reduce energy use.
- **Policy IRC-5.1:** As appropriate, update West Hollywood's green building regulations regularly and continue to administer a Green Building Program and/or enforce green building requirements within the City.
- **Policy IRC-5.3:** Offer incentives for buildings to exceed the minimum Green Building Program requirements.
- **Policy IRC-6.9:** In conjunction with policies in the Mobility Chapter of this General Plan, encourage a shift in travel from single-occupant autos to walking, biking, public transit, and ride-sharing, with a focus on policies that promote the following:
  - Increase walking within the City
  - Increase transit use and reduce barriers to transit ridership
  - Increase ride-sharing
  - Promote alternatives to automobile ownership
- **Policy IRC-6.10:** Implement policies in the Infrastructure, Resources, and Conservation Chapter that reduce greenhouse gas emissions related to water and wastewater, energy,

green building, recycling, and solid waste, and facilities for City operations, including policies that accomplish the following:

  - Reduce energy associated with the use, treatment, and conveyance of water and wastewater
  - Improve energy efficiency in existing buildings
  - Ensure high levels of energy performance in new construction
  - Maximize the use of renewable energy
  - Reduce the amount of waste sent to landfills

- **Policy IRC-7.2:** Support land use and transportation strategies to reduce driving rates and resulting air pollution, including pollution from commercial and passenger vehicles.
- **Policy IRC-7.3:** Promote fuel efficiency and cleaner fuels for vehicles as well as construction and maintenance equipment by requesting that City contractors provide cleaner fleets.
- **Policy IRC-7.4:** Prohibit combustion or gasoline powered engines in leaf blowers.
- **Policy IRC-7.5:** Discourage the use of equipment with two-stroke engines and publicize the benefits and importance of alternative technologies.
- **Policy IRC-7.6:** Support increased local access to cleaner fuels and cleaner energy by encouraging fueling stations that provide cleaner fuels and energy to the community.
- **Policy IRC-10.1:** Aggressively seek to reduce West Hollywood's rate of waste disposal per capita.
- **Policy IRC-10.2:** Provide services for recycling and composting and expand these services over time, where appropriate.
- **Policy IRC-10.3:** Encourage all construction projects (regardless of size) to divert 80% of the construction waste debris away from landfills.
- **Policy IRC-10.4:** Provide ongoing education to residents and businesses about waste reduction, composting, and recycling.
- **Policy IRC-10.7:** Encourage the use of recycled building materials in public and private development projects.
- **Policy IRC-10.10:** Collaborate with other government agencies to promote waste reduction.

City of West Hollywood General Plan 2035 Mobility Element

The Mobility Element of the West Hollywood General Plan 2035 (City of West Hollywood 2011a) sets forth strategies for creating a balanced and multi-modal transportation system. The policies in this element are relevant to this section of the EIR because creation of a multi-modal

transportation system supports a reduction in the use of single-occupancy vehicles, which are typically associated with greater energy demand per capita when compared with alternative modes of transportation. Relevant policies are as follows:

- **Policy M-1.3:** Consider requiring development projects to include transit amenities and transit incentive programs.
- **Policy M-3.9:** Require new commercial development to provide for the construction of pedestrian rights of way to allow convenient and unimpeded circulation to, through, and within the property being developed.
- **Policy M-3.10:** Require design measures as appropriate to accommodate access by pedestrians, bicycles, and transit within new development and to provide connections to adjacent development.
- **Policy M-4.2:** As feasible, ensure that new development of commercial and multi-family residential uses enhance the City's bicycle network and facilities.
- **Policy M-5.8:** Allow for the collection of fees from developers to undertake the following infrastructure projects to support new development: sidewalk improvements, landscaping, bicycle infrastructure, traffic calming devices, traffic signals, and other improvements that promote/maintain the pedestrian-oriented character of the community (i.e., traffic calming devices and Transportation Demand Management programs).
- **Policy M-5.9:** Require new development to pay its share of transportation improvements necessitated by that development.
- **Policy M-8.16:** Encourage building owners and/or managers of new multi-family and commercial buildings to make parking spaces available to qualified car-share operators, and to allow public access to the car-share vehicles.

City of West Hollywood Climate Action Plan

The City of West Hollywood's CAP recommends a series of actions that the City, residents, property owners, and businesses can take to reduce their contributions to global climate change by reducing GHG emissions. Reductions in GHG emissions are generally correlated with energy savings. The City's CAP outlines a course of action to reduce municipal and communitywide GHG emissions. The City's CAP seeks to:

- Provide clear guidance to City staff and decision-makers regarding when and how to implement key actions to reduce GHG emissions.
- Place the City on a path to reduce annual communitywide GHG emissions by 20% to 25% below 2008 business-as-usual emission levels by 2035.

- Inspire residents, property owners, and businesses to participate in community efforts to reduce GHG emissions.
- Demonstrate West Hollywood's ability to respond to and comply with California GHG reduction legislation and guidelines.

The City's CAP includes strategies and performance indicators to reduce GHG emissions from both municipal and communitywide activities within the City (City of West Hollywood 2011b).

City of West Hollywood's Green Building Ordinance

The City adopted one of the nation's first mandatory green building ordinances, which became effective in 2007. The Green Building Ordinance addresses construction and demolition waste, requires new buildings to anticipate future solar panel installations, regulates use of materials with volatile organic compounds, requires Energy Star appliances, requires transportation demand management strategies and minimum bicycle facilities, and refers to and builds upon California Title 24 standards for energy performance. The Green Building Ordinance includes a point system for new construction with incentives for projects that achieve "exemplary" status. The point system was designed to emphasize locally available materials, encourage green elements to be incorporated early into project design, and provide flexibility to alter green elements as the project evolves (City of West Hollywood 2011a).

The proposed project would be required to comply with the City's Green Building Ordinance. Page A-0.04 of the proposed project's site plans include a chart showing points that the project has received per the Green Building Ordinance point system (see Appendix B). The proposed project exceeds the number of points that are required for compliance with the Green Building Ordinance but does not meet the number of points required to receive development incentives. However, the proposed project would be designed to meet a minimum of LEED Silver certification or equivalent green building standards.

2011 Bicycle Task Force Report

The Bicycle Task Force was created in 2010 upon City Council direction. The Bicycle Task Force was comprised of 18 members from a wide spectrum of community interests, including representation from City commissions. The Bicycle Task Force was charged with preparing a range of recommendations to improve bicycle mobility throughout the City and with developing recommendations for community education on bicycle safety. Other goals for the Bicycle Task Force included learning and duplicating best practices from other cities with successful bike programs, identifying local routes for various types of bike lanes to expand and modify existing routes, and educating the community on cycling and pedestrian safety. In response to these goals,

the Bicycle Task Force prepared the Bicycle Task Force Report to summarize its recommendations. The four primary goals identified in this report are as follows:

- Enhance cycling as a safe, healthy, and enjoyable form of transportation and recreation
- Increase the number and types of cyclists who commute in and through the City
- Reduce auto congestion throughout the City
- Provide infrastructure improvements to increase safety and connectivity (City of West Hollywood 2011c)

2003 Bicycle and Pedestrian Mobility Plan

The West Hollywood Bicycle and Pedestrian Mobility Plan set forth goals, objectives, policy actions, and design guidelines to improve and facilitate bicycle and pedestrian transportation. This is an 18-year plan that provides a blueprint for improving quality of life, creating a more sustainable environment, reducing traffic congestion, vehicle exhaust, emissions, noise, and energy consumption. This plan lays out the policy framework for the implementation of an overall vision for the City that consists of the following overarching goals:

- People can conveniently walk and/or bicycle to their destinations
- People can rely on support facilities at their worksites and at other destinations
- People feel safe walking and bicycling anywhere
- People from all age groups feel comfortable walking or bicycling
- People with disabilities can more easily travel in the city
- Visitors are attracted by the enhanced walking and cycling environment
- Commercial streets are exciting places to visit (City of West Hollywood 2003)

West Hollywood Design District Streetscape Master Plan

The Streetscape Master Plan area consists of the public right-of-way on the following streets within the City: Melrose Avenue, Robertson Boulevard, Beverly Boulevard, and Almont Drive and La Peer Drive between Melrose Avenue and Santa Monica Boulevard. This area, now known as the West Hollywood Design District (Design District), is referred to as the Melrose/Beverly District in the General Plan and was formerly known as the Avenues District (City of West Hollywood 2014a). The overall goal of the Streetscape Master Plan is to strengthen the economic vitality of the Design District by improving the pedestrian environment, adding bicycle infrastructure, public gathering spaces, and landscaping, while improving the

overall aesthetics and utility of the streets. As such, implementation of the Streetscape Master Plan will support use of non-vehicular modes of transportation within the Design District.

3.13.3 Thresholds of Significance

The CEQA Guidelines provide no specific thresholds for impacts associated with energy consumption. However, Appendix F of the CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a development project may result in significant impacts with regard to energy. Based on Appendix F of the CEQA Guidelines, a project could have a significant impact on energy consumption if the project would:

a. Result in wasteful, inefficient, or unnecessary consumption of energy.

b. Conflict with existing energy standards and regulations.

c. Place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity.

3.13.4 Methodology

A brief overview of the methodology applied to assess the project's potential impacts is provided below:

- **Electricity:** Proposed project and existing on-site electricity usage data were determined using CalEEMod Version 2013.2.2. Electricity demand within SCE's service area was obtained for CPUC reports (specifically, the RPS Program Updates). Electricity demand within the City was obtained for the City's General Plan EIR.
- **Natural Gas:** Proposed project and existing on-site natural gas usage data were provided using CalEEMod. Regional natural gas demand data was obtained from CEC reports (specifically, the California Energy Demand Forecast). Natural gas demand within the City was obtained from the City's General Plan EIR. Information on natural gas supply was obtained from the 2016 California Gas Report.
- **Petroleum:** Potential impacts were assessed through projected traffic trip generation during construction and operation, as provided by the CalEEMod outputs and the traffic impact report that was prepared for the project (Appendix C and Appendix J, respectively). Fuel consumption factors were obtained using California's Emission Factors model (EMFAC), which was developed by CARB to calculate emission rates from all vehicles operating on roadways in the state. Fuel consumption factors were calculated for worker vehicles, vendor trucks, and haul trucks using EMFAC2014 for years 2015 (existing conditions) and 2020 (operational conditions). EMFAC2014 provides fuel consumption for each vehicle class type. Worker vehicles were assumed to

consist of passenger cars and light duty trucks. Vendor trucks were assumed to consist of light heavy duty trucks, medium duty vehicles, and medium heavy duty trucks. Haul trucks were assumed to consist of heavy duty trucks. A weighted average fuel consumption factor was determined for worker vehicles and vendor trucks using the total fuel consumption per vehicle class type and vehicle miles traveled per vehicle class type. Haul trucks were assumed to be diesel engines only, while vendor trucks and worker vehicles were assumed to be diesel or gasoline engine vehicles. To provide conservative calculations, construction petroleum use was calculated using 2015 fuel consumption factors. Operational vehicular trips were assumed to consist of passenger cars and light duty trucks. The weighted average fuel consumption factor was calculated using the total fuel consumption per vehicle class type and vehicle miles traveled per vehicle class type. Operational petroleum use was calculated using 2020 fuel consumption factors.

3.13.5 Impact Analysis

Threshold A: Would the project result in wasteful, inefficient, or unnecessary consumption of energy?

Implementation of the project would increase the demand for electricity and natural gas at the project site and gasoline consumption in the project area during construction and operation relative to existing uses.

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers would be provided by SCE. The electricity used for such activities would be temporary and would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption.

Operational Use

The operational phase would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. CalEEMod was used to estimate project emissions from electricity uses (see Appendix C for calculations). Default electricity generation rates in CalEEMod were used (based on the proposed land use and climate zone) and adjusted based on compliance with Title 24 standards for 2013. According to these estimations, the project would consume approximately 5,080,570 kWh per year. The electricity consumption at the project site under

existing conditions was also calculated using CalEEMod and is estimated to be 1,364,759 kWh per year. As such, upon project implementation, electricity demand at the project site would increase by 3,715,811 kWh per year (Appendix C). Although the proposed project would result in a net increase in total square footage and in total electricity consumption on the project site, the amount of electricity used per square foot is anticipated to decrease upon project implementation. According to the calculations presented above, the existing on-site uses have an annual electricity demand of approximately 15 kWh per square foot, whereas the proposed project's annual electricity demand would be approximately 10 kWh per square foot. As measured against the existing environmental condition, the proposed project would result in a 33% net decrease in annnual electricity demand per square foot. This anticipated decrease is attributable to the newer, energy-efficient building design and the increasing stringency of modern energy standards.

As described above, the electricity demand calculation for the proposed project assumes compliance with Title 24 standards for 2013. This estimate is conservative, as the proposed project will likely be subject to the more stringent 2016 standards that went into effect on January 1, 2017. Additionally, the demand calculations do not take into account the project's energy-saving design features that would result in exceedances of the code requirements. As such, the proposed multi-use hotel building's electricity use would be more efficient than what is required and would likely be even lower than the calculations presented above. The project's relationship to efficiency requirements and project-specific design features that would minimize electricity use are summarized below.

The project would be required to meet the California Building Energy Efficiency Standards (24 CCR, Part 6) which improve the energy efficiency of non-residential buildings. The Title 24, Part 6, standards are updated every three years. The amendments that were applicable through 2016 were the 2013 standards. Buildings constructed in accordance with the 2013 standards use 25% less energy for lighting, heating, cooling, ventilation, and water heating than buildings constructed in accordance with the 2008 standards. The most recent amendments to Title 24, Part 6, referred to as the 2016 standards, will become effective on January 1, 2017. In general, non-residential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015). Although the project would be required to comply with 2016 Title 24 standards because it would be constructed after January 1, 2017, this energy analysis does not quantify the increased energy efficiency associated with the more stringent 2016 Title 24 standards and relies instead on the 2013 standards to remain conservative.

The proposed multi-use hotel building would be designed to meet a minimum of LEED Silver certification or equivalent green building standards. LEED requires at least 10% improvement in energy efficiency over Title 24 requirements (USGBC 2011; VCA Green 2015). As such, the proposed project would exceed California code requirements for energy efficiency. To

meet the prerequisite energy performance design standards for LEED certification, the project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC 2016)). No reductions for these energy-efficiency measures were accounted for in the electricity usage calculations, to ensure a conservative analysis. It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the proposed project could potentially exceed these standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

The project would involve installation of Energy Star–labeled products and appliances where appropriate, compact fluorescent light bulbs, energy saving lighting schemes such as occupancy-sensing controls (where applicable), use of LED lighting or other energy-efficient lighting technologies where appropriate, and energy-efficient heating and cooling equipment. Exterior lighting elements would be controlled by light sensors and/or time clocks to avoid over lighting as appropriate (see Section 2.4 of this EIR for a complete list of the project's sustainable design features). These aspects of the project design would reduce energy associated with indoor and outdoor lighting, as well as the building's appliances and climate control equipment.

Peak electricity use for a typical full-service hotel occurs in the winter and summer seasons. In Southern California specifically, peak use is expected to occur during the summer months when HVAC systems are most heavily used. On a daily basis, peak electricity use in hotels typically occurs in the evenings (ACEEE 2010). Within SCE's service area, peak electricity use occurs in the summer (June 1 through October 1). During the day, peak use occurs between noon and 6 p.m. during the summer, and between 8 a.m. and 9 p.m. during the winter (SCE 2016). As such, the proposed project's peak electricity use is expected to align generally with typical peak use patterns in the region. The regulations and design features described above would reduce the project's effect on peak and base periods of electricity demand.

In summary, although electricity consumption would increase on the project site due to the implementation of the project, the project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent green building standards. Additionally, the proposed project is expected to result in a 33% decrease in annnual electricity demand per square foot when compared to the existing site conditions. Construction electricity usage would be minimal relative to the project's overall energy consumption. For these reasons, the electricity consumption of the proposed project would not be considered inefficient or wasteful, and impacts would be **less than significant**.

Natural Gas

Construction Use

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would be substantially less than that required for project operation and would have a negligible contribution to the project's overall energy consumption.

Operational Use

The operation of the proposed project would require natural gas for various purposes, including building heating and cooling, service water heating, kitchen appliances, and laundry equipment (ACEEE 2010). Default natural gas usage rates in CalEEMod for the proposed land use and climate zone were used and adjusted based on compliance with 2013 Title 24 standards (see Appendix C for calculations). According to these estimations, the project would consume approximately 12,640,471 kBTU per year. The natural gas consumption at the project site under existing conditions was also calculated using CalEEMod. Under existing conditions, it is estimated that 4,692,471 kBTU per year is used at the project site by the existing commercial uses. As such, upon project implementation, natural gas demand at the project site would increase by 7,948,000 kBTU per year (Appendix C).

Although the proposed project would result in a net increase in total square footage and in total natural gas consumption on the project site, the amount of natural gas used per square foot is anticipated to decrease upon project implementation. According to the calculations presented above, the existing on-site uses have an annual natural gas demand of 53 kBTU per square foot, whereas the proposed project's annual natural gas demand would be approximately 24 kBTU per square foot. Therefore, as measured against the existing environmental condition, the proposed project would result in a 55% net decrease in annnual natural gas usage per square foot. This anticipated decrese is attributable to the newer, energy-efficient building design and the increasing stringency of modern energy standards.

As with electricity demand, the anticipated reduction in natural gas usage per square foot is attributatble, in part, to compliance with the 2013 Title 24 standards, which was assumed for the CalEEMod calculations described above. However, because the proposed project would be subject to the more stringent 2016 Title 24 standards and would also exceed energy efficiency code requirements through project design, the project's natural gas demand could likely be lower than the calculations presented above. The 2016 Title 24 standards, which became effective in January 2017, are expected to result in a 5% decrease in energy usage relative to the 2013 standards. The project would be constructed after January 1, 2017 and would be subject to these

more stringent requirements. Additionally, the proposed project would be designed to meet a minimum of LEED Silver certification or equivalent green building standards, which would require at least a 10% improvement in energy efficiency over Title 24 requirements (VCA-Green 2015; USGBC 2011). Project-specific sustainable design features are listed in Section 2.4 of this EIR and include energy-efficient heating and cooling equipment, which would minimize the project's natural gas use.

Peak natural gas use for full-service hotels typically occurs in winter, although the variation in natural gas use throughout the year is not substantial (ACEEE 2010). In Southern California, peak demand occurs in winter (California Gas and Electric Utilities 2016). As such, the proposed project's peak natural gas use is expected to align generally with typical peak use patterns in the region. The regulations and design features described above would reduce the project's effect on peak and base periods of natural gas demand.

In summary, although natural gas usage would increase due to the implementation of the project, the project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent green building standards. Additionally, the proposed project is expected to result in a 55% decrease in annnual natural gas usage per square foot when compared to the existing site conditions. For these reasons, the natural gas consumption of the proposed project would not be considered inefficient or wasteful, and impacts would be **less than significant.**

Petroleum

Construction Use

Heavy-duty construction equipment associated with demolition and construction activities for the proposed project would rely on diesel fuel, as would haul trucks involved in removing the materials from demolition and excavation. Construction workers would travel to and from the project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of project construction. The CalEEMod analysis discussed in Section 3.2, Air Quality, and included in Appendix C lists the assumed equipment usage for each phase of construction. Based on that analysis, over all phases of construction, diesel-fueled construction equipment would run for an estimated 46,586 hours as summarized in Table 3.13-2.

Table 3.13-2
Hours of Operation for Construction Equipment

Construction Phase	Hours of Equipment Use
Park Site – Grading and Site Preparation	6,000
Hotel Site – Demolition	1,680
Park Site – Garage Construction	5,916
Hotel Site – Grading and Site Preparation	6,288
Park Site– Backfill, Site Grading, and Park Construction	2,064
Hotel Site – Building Construction	23,528
Hotel Site – Architectural Coating	150
Surface Paved Areas	960
Total	**46,586**

Source: Appendix C.

Assuming that off-road construction equipment for the proposed project would have an average horsepower of 100 to 175, the average diesel fuel efficiency for off-road construction equipment for the project would be approximately 1.74 gallons per hour (EPA 2010). As such, given the total operating time of 46,586 hours, construction equipment would consume approximately 81,060 gallons of diesel fuel during the proposed project's construction period.

Based on CalEEMod estimates, approximately 21,851 one-way haul trips would be required over the course of the construction period. The vehicle miles traveled per trip is assumed to be approximately 20 miles, equating to 437,020 VMT. Assuming an average diesel fuel efficiency of 5.4 miles per gallon for heavy duty trucks, hauling would consume 80,930 gallons of petroleum (EMFAC 2014).

In addition to haul trucks, vendor trucks would also travel to and from the site to deliver materials. Based on CalEEMod estimates, approximately 19,914 one-way vendor truck trips would occur over the course of the construction period. The VMT per trip is assumed to be approximately 6.9 miles, equating to 137,407 VMT (Appendix C). The average fuel consumption for vendor trucks is assumed to be 12.9 miles per gallon (EMFAC 2014). As such, vendor trucks (i.e., material deliveries) would consume approximately 10,652 gallons of petroleum during project construction.

Fuel would also be consumed by construction workers traveling to and from the project site throughout the construction period. The number of construction workers required would vary based on the construction phase and activity. Using CalEEMod estimates, construction would result in a total of 46,743 one-way worker trips and each trip would be 14.7 miles in length. As such, construction worker commute trips would result in 687,122 VMT. Assuming an average fuel consumption of 21.7 miles per gallon for light duty vehicles (EMFAC 2014), demolition and construction activities on site would use approximately 31,665 gallons of petroleum for

construction worker trips. This estimate is conservative given that it does not account for carpooling or use of public transit by construction workers.

While the project's impacts in the category of greenhouse gas emissions was determined to be less than significant, the project would be required to comply with mitigation measure 3.15-1 from the Final Program EIR for the City's General Plan and CAP. This measure addresses and reduces construction-related greenhouse gas emissions in the City (see Section 3.5 of this EIR for details). Reducing greenhouse gas emissions during construction would help reduce construction-related fuel usage.

In summary, the proposed project is conservatively anticipated to consume 204,307 gallons of petroleum during the construction phase, which would last approximately two and a half years (extending approximately from spring 2017 to fall 2019). By comparison, California's consumption of petroleum is approximately 72 million gallons per day. Based on these assumptions, approximately 66 billion gallons of petroleum would be consumed in California over the course of the construction period (EIA 2016b). Construction of the proposed project would, therefore, equate to 0.0003% of the total amount of petroleum that would be used statewide during the course of the construction period. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. Further, the petroleum consumed related to project construction would be typical of construction projects of similar types and sizes and would not necessitate new petroleum resources beyond what are typically consumed in California.

Further, due to the fact that the proposed project would be built on an urban infill site, construction worker trip and haul truck trip distances are anticipated to be reduced as compared to sites that are not located in urban centers. In addition, the project site is well served by public transportation services and more construction workers would be anticipated to use public transportation to access the project site during construction as compared to other sites that have fewer public transportation opportunities. Therefore, construction worker trips and associated petroleum consumption would be expected to be reduced compared to similar construction projects in suburban locations.

Operational Use

During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles traveling to and from the project site, as well as fuels used for alternative modes of transportation that may be used by employees, visitors, and guests of the proposed multi-use hotel building.

Petroleum fuel consumption associated with motor vehicles traveling to and from the project site is a function of the vehicle miles traveled as a result of project operation. As shown in Appendix

C (CalEEMod outputs), the annual VMT attributable to the proposed project is expected to be 10,929,882 VMT (Appendix C). Assuming an average fuel consumption of 24.8 miles per gallon in 2020 (EMFAC 2014), the project would consume 440,721 gallons of petroleum per year of operation for vehicular trips to and from the proposed multi-use hotel building.

Under existing conditions at the project site, the commercial uses are estimated to result in 4,568,806 VMT per year (Appendix C). Assuming an average fuel consumption of 21.7 miles per gallon under existing conditions (EMFAC 2014), existing site operations result in consumption of 210,544 gallons of petroleum per year. As such, implementation of the project would lead to an increase in gasoline consumption of 230,177 gallons per year, due to the increased number of people who would be traveling to and from the project site. By comparison, California as a whole consumes approximately 26 billion gallons of petroleum per year. The anticipated increase in consumption associated with one year of project operation is 0.0009% of the statewide use.

It should be noted that over the lifetime of the project, the fuel efficiency of the vehicles being used by the visitors, employees, and guests of the multi-use hotel building is expected to increase. As such, the amount of gasoline consumed as a result of vehicular trips to and from the project site during operation would decrease over time. As discussed under Section 3.13.2, there are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted a new approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and ZEVs in California (CARB 2013). Additionally, in response to SB 375, CARB has adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by the year 2020 and 13% by the year 2035 for light-duty passenger vehicles in the SCAG planning area. This reduction would occur by reducing vehicle miles traveled through the integration of land use planning and transportation (SCAG 2012). As such, operation of the project is expected to use decreasing amounts of petroleum over time, due to advances in fuel economy.

Additionally, the operational VMT calculation described above (10,929,882 VMT per year) conservatively assumes that public transportation would not be used to travel to and from the project site. However, due to the urban setting of the proposed project and design features that would encourage use of alternative transportation modes, it is expected that visitors, guests, and employees may use transit or non-vehicular modes of transportation to travel to and from the project. The project area is already served by a variety of bus transit lines extending along the major roadways near the project site, including Santa Monica Boulevard, Robertson Boulevard, and Melrose Avenue (see Section 3.11, Transportation and Traffic, and Appendix J for details). Also, use of transit and non-vehicular modes of transportation is anticipated to increase over time, as local and regional plans and policies facilitating increased use and development of transit and non-vehicular transportation modes are implemented. Section 3.13.2 summarizes

some of these plans and policies, which include SCAG's 2016–2040 RTP/SCS, the City of West Hollywood General Plan Mobility Element, and City of West Hollywood Bicycle and Pedestrian Mobility Plan. Additionally, project-specific sustainable design features would include transportation features, as described in Section 2.4 of this EIR. Such features include preparation and implementation of a TDM Plan and provision of on-site bicycle storage for visitors and employees. Additionally, the proposed project design would encourage pedestrian circulation in the project area by creating a new pedestrian connection (Robertson Lane), by enhancing the streetscape along the project site's street frontages, and by developing commercial uses along the sidewalk at street level, which would foster pedestrian interaction, consistent with the Streetscape Master Plan and General Plan land use policies.

In summary, although the project would see an increase in petroleum use during construction and operation, vehicles would use less petroleum due to advances in fuel economy over time. Additionally, the proposed project would include a variety of features that are expected to reduce the number of vehicles traveling to and from the site during operation. For example, the project would include implementation of a Transportation Demand Management Plan, would be accessible via a variety of major bus lines, would include on-site bicycle infrastructure, and would enhance the pedestrian-friendliness of the project area (see Section 2.4 of this EIR for details on the project's sustainable design features). As such, while the project would generate more vehicle trips when compared to existing conditions, it would add non-vehicular transportation amenities to the site that are not currently present, such as a new pedestrian connection, enhanced streetscape, bicycle parking and storage, and pedestrian-friendly frontage design. Furthermore, when viewed on a regional scale, the proposed project is an urban infill project located within a major population center that serves an existing demand for hotel rooms. When compared with new development projects sited on previously undeveloped land and away from population centers, infill projects are generally expected to involve fewer vehicles miles traveled during operation. Given these considerations, the petroleum consumption associated with the proposed project would not be considered inefficient or wasteful, and impacts would be **less than significant.**

Threshold B: Would the project conflict with existing energy standards and regulations?

The proposed project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR, Part 6). Part 6 of Title 24 establishes energy efficiency standards for residential and non-residential buildings constructed in California in order to reduce energy demand and consumption. Additionally, the proposed project would go beyond the requirements of the California Building Energy Efficiency Standards because the multi-use hotel building would be designed to meet LEED Silver certification or equivalent green building standards. LEED requires at least 10% improvement in energy efficiency over Title 24 requirements (USGBC 2011; VCA Green 2015). As such, the proposed project would exceed California code requirements for energy efficiency.

Part 11 of Title 24 sets forth voluntary and mandatory energy measures that are applicable to the project under the California Green Building Standards Code. As discussed under the previous threshold, the project would result in an increased demand for electricity, natural gas, and petroleum. In accordance with Title 24 Part 11 mandatory compliance, the proposed project would have (a) at least 50% of its construction and demolition waste diverted from landfills[3]; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring and particle boards; and, (d) a 20% reduction in indoor water use. Because the project would comply with and exceed the existing energy standards and regulations, **no impact** would result due to conflicts with energy standards and regulations.

Threshold C: Place a significant demand on local and regional energy supplies or require a substantial amount of additional capacity?

Electricity

As described in Section 3.13.1, electricity is supplied to the project site by SCE. As of 2014, approximately 76 billion kWh of electricity were used in SCE's service area. Annual retail sales of electricity in SCE's service area are forecasted to be approximately 75 billion kWh in 2020 (CPUC 2016). Upon implementation of the proposed project, the amount of electricity used at the project site is anticipated to increase by 3,715,811 kWh per year (Appendix C). This increase represents 0.0049% of SCE's existing demand and approximately 0.0050% of SCE's total forecasted electricity sales in 2020 (near the time of project buildout). As such, under both existing and future conditions, the increase in electricity demand at the project site would be negligible relative to the electricity use in SCE's service area. Furthermore, the increase in electricity demand at the project site would be accommodated within the amount of electricity that SCE is anticipated to provide in its service area in 2020. At the local scale, the City's General Plan EIR provides electricity demand forecasts that are specific to the City. Between 2009 and 2035, the City's electricity demand is anticipated to grow by approximately 19.5%. The increase in electricity consumption attributable to the proposed project is approximately 1% of the City's 2009 electricity demand and 0.9% of the City's anticipated 2035 demand. (In 2009, the City's annual electricity consumption was 335,380,279 kWh and in 2035, the City's annual electricity consumption is anticipated to be 400,934,955 kWh per year (City of West Hollywood 2010)). As such, the increase in electricity usage in the City attributable to the proposed project falls well within the total growth in demand that has been anticipated in the General Plan.

[3] City of West Hollywood standards for construction waste diversion are more stringent. In accordance with these local standards, the proposed project would be required to divert 80% of construction and demolition waste (City of West Hollywood 2014b).

Natural Gas

As described in Section 3.13.1, natural gas is supplied to the project site by SoCalGas. As of 2012, approximately 7,357 million therms of natural gas were used in SoCalGas' service area per year. Around the time of project buildout in 2020, natural gas demand is anticipated to be approximately 7,388 million therms per year in SoCalGas' service area (CEC 2014). The total capacity available is anticipated to be 3.9 billion cubic feet per day. This equates to 14.5 billion therms per year, which is well above both existing and future anticipated demand.

Upon implementation of the proposed project, the amount of natural gas used at the project site per year is anticipated to increase by 7,948,000 kBTU relative to existing conditions. This amount of natural gas is equivalent to 79,480 therms.[4] The expected increase in use represents approximately 0.001% of SoCalGas' existing 2014 demand and 0.001% of SoCalGas' future 2020 demand. This increase is 0.0005% of SoCalGas' existing and future available supply. As with electricity, the City's General Plan EIR provides natural gas demand forecasts that are specific to the City. Between 2009 and 2035, the City's natural gas demand is anticipated to grow by approximately 7%. The increase in natural gas consumption attributable to the proposed project is approximately 0.5% of the City's 2009 natural gas demand and 0.4% of the City's anticipated 2035 demand. (In 2009, the City's annual natural gas consumption was 16,940,221 therms and in 2035, the City's annual natural gas consumption is anticipated to be 18,125,749 therms (City of West Hollywood 2010)). As such, the increase in natural gas usage in the City attributable to the proposed project falls well within the total growth in demand that has been anticipated in the General Plan.

Petroleum

The proposed project would increase the use of petroleum relative to existing conditions at the project site. During the construction phase, it is anticipated that approximately 204,307 gallons of petroleum would be used. This amount is approximately 0.0003% of the total amount of petroleum that would be used statewide during the course of the construction period. During operation, the increase in number of vehicles traveling to and from the project site would result in petroleum consumption of 230,177 gallons per year. This equates to 0.0009% of yearly gasoline use throughout the state. As described in Section 3.13.1, the United States produces approximately 630 million gallons of petroleum per day, amounting to 230 billion gallons per year. The increase in petroleum attributable to the proposed project would be negligible relative to petroleum production in the United States alone. Furthermore, the proposed project is located on an urban infill site that is served by transit. The operational petroleum consumption of the proposed project was conservatively calculated under the assumption that alternative transportation would not be used by the project's visitors, staff, and guests. However, due to the

[4] One Therm is equal to 100,000 Btu or 100 kBtu. 7,948,000 kBTU ÷ 100 = 79,480 Therms

project's located within an urban center, its proximity to alternative transportation facilities, and the plans and policies that are in place at the local, regional, and state level to support the use of alternative transportation, it is anticipated that the project's operational petroleum use may be less than 230,177 gallons per year and may decrease over time. Additionally, policies are in place at the state and federal level to increase fuel efficiency over time. Increasing efficiency of vehicles over the lifetime of the project is also anticipated to result in incremental reductions in the project's operational fuel use.

For the reasons described above, the proposed project's energy use falls well within local and regional energy supplies. The proposed project's anticipated energy consumption is minimal relative to both existing energy consumption and future consumption at both the local and regional scale. Further, as substantiated in the calculations above, the increase in electricity and natural gas usage attributable to the proposed project falls within anticipated increases in the City's electricity and natural gas demands, and therefore the proposed project would not create a significant demand on supplies or require substantial additional capacity to provide electricity or natural gas services. Regarding petroleum, fuel economy and use of alternative modes of transportation are expected to increase over time, and even without such reductions in future petroleum use, the petroleum use associated with the proposed project would be negligible relative to current use and production. Therefore the proposed project would not create a significant demand on petroleum supplies or require substantial additional petroleum services capacity. Impacts would be **less than significant**.

3.13.6 Mitigation Measures

Impacts would be less than significant. No mitigation measures are required.

3.13.7 Significance after Mitigation

Impacts would be less than significant.

3.13.8 References

ACEEE (American Council for an Energy-Efficient Economy). 2010. *Energy End-Use Patterns in Full-Service Hotels: A Case Study*. 2010. Accessed September 12, 2016. http://aceee.org/files/proceedings/2010/data/papers/1984.pdf.

California Gas and Electric Utilities (Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southwest Gas Corporation, City of Long Beach Gas & Oil Department, and Southern California Edison Company). 2016. *2016 California Gas Report*. 2016. Accessed October 12, 2016. https://www.socalgas.com/regulatory/cgr.shtml.

CARB (California Air Resources Board). 2011. Facts About The Advanced Clean Cars Program. November 9, 2011. Accessed February September 9, 2016. http://www.arb.ca.gov/msprog/zevprog/factsheets/advanced_clean_cars_eng.pdf.

CARB. 2013. "Clean Car Standards - Pavley, Assembly Bill 1493." May 6, 2013. Accessed September 9, 2016. http://arb.ca.gov/cc/ccms/ccms.htm.

CARB. 2014. "Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation." August 29, 2014. Accessed July 29, 2015. http://www.arb.ca.gov/msprog/onrdiesel/documents/FSRegSum.pdf.

CARB. 2015. Clean Power Plan Compliance Discussion Paper. September 2015. Accessed September 9, 2016. http://www.arb.ca.gov/cc/powerplants/meetings/2015whitepaper.pdf.

CEC (California Energy Commission). 2011. "What is Your Home Energy Rating?" Updated 2011. Accessed October 12, 2016. http://www.energy.ca.gov/2009publications/CEC-400-2009-008/CEC-400-2009-008-BR-REV1.PDF.

CEC. 2013. *Integrated Energy Policy Report 2013*. CEC-100-2013-001-CMF. 2013. Accessed October 12, 2016. http://www.energy.ca.gov/2013publications/CEC-100-2013-001/CEC-100-2013-001-CMF.pdf.

CEC. 2014. *California Energy Demand 2014-2024 Final Forecast*. Commission Final Report. CEC-200-2013-004-V1-CMF. January 2014. Accessed September 2, 2016. http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC-200-2013-004-V1-CMF.pdf.

CEC. 2015. "2016 Building Efficiency Standards Adoption Hearing Presentation." June 2015. Accessed August 2016. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2015-06-10_hearing/2015-06-10_Adoption_Hearing_Presentation.pdf#page=8.

CEC (California Energy Commission). 2016a. *California Energy Demand 2016-2026, Revised Electricity Forecast*. CEC-200-2016-001-V1. January 2016. Accessed October 12, 2016. http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-03/TN207439_20160115T152221 _California_Energy_Demand_20162026_Revised_Electricity_Forecast.pdf.

CEC. 2016b. *California Energy Commission – Tracking Progress*. "Renewable Energy Overview." Last updated October 11, 2016. Accessed October 12, 2016. http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf.

CEC. 2016c. "California Natural Gas Data and Statistics." Accessed September 2, 2016. http://www.energy.ca.gov/almanac/naturalgas_data/overview.html.

City of West Hollywood. 2003. *Final West Hollywood Bicycle and Pedestrian Mobility Plan*. Adopted 2003. Accessed January 23, 2015. http://www.weho.org/city-hall/city-departments-divisions/community-development/long-range-and-mobility-planning/programs/bike-weho.

City of West Hollywood. 2010. *Final Program Environmental Impact Report City of West Hollywood General Plan and Climate Action Plan*. SCH #2009091124. Prepared by AECOM. October 2010.

City of West Hollywood. 2011a. City of West Hollywood General Plan 2035. Accessed February 17, 2016. http://www.weho.org/Home/ShowDocument?id=7929.

City of West Hollywood. 2011b. City of West Hollywood Climate Action Plan. September 6, 2011. Accessed February 17, 2016. http://www.weho.org/home/showdocument?id=7949.

City of West Hollywood. 2011c. West Hollywood Bicycle Task Force Report – Recommendations to City Council. November 21, 2011. Accessed November 22, 2015. http://www.weho.org/city-hall/city-departments-divisions/community-development/long-range-and-mobility-planning/programs/bike-weho.

City of West Hollywood. 2014a. *West Hollywood Design District Streetscape Master Plan*, Final. Adopted December 15, 2014.

City of West Hollywood. 2014b. *Construction and Demolition Waste Management Plan Form.* Construction and Development Information. Accessed October 1, 2014. http://www.weho.org/city-hall/city-departments/public-works/environmental-services/construction-and-development-information.

CPUC (California Public Utilities Commission). 2014. *Biennial RPS Program Update*. February 2014.

CPUC (California Public Utilities Commission). 2016. *Biennial RPS Program Update*. January 1, 2016.

ECDMS (Energy Consumption Data Management System). 2016. "Electricity Consumption by County." Accessed September 2, 2016. http://ecdms.energy.ca.gov/elecbycounty.aspx.

EMFAC 2014 (California Emissions Factor Model). 2014. "California Air Resources Board EMFAC Web Database." Accessed September 13, 2016. https://www.arb.ca.gov/emfac/2014/.

EIA (U.S. Energy Information Administration). 2015a. "United States' Key Energy Statistics." Accessed September 8, 2016. www.eia.gov/beta/international/country.cfm?iso=USA .

EIA. 2015b. *Annual Energy Outlook 2015*. DOE/EIA-0383(2015). April 2015. Accessed September 7, 2016. http://www.eia.gov/forecasts/aeo/pdf/0383(2015).pdf.

EIA (U.S. Energy Information Administration). 2016a. "California State Profile and Energy Estimates – Table F19: Natural Gas Consumption Estimates, 2014." Accessed September 7, 2016. http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_ng.html&sid=US&sid=CA.

EIA. 2016b. "California State Profile and Energy Estimates – Table F15: Total Petroleum Consumption Estimates, 2014." Accessed June 20, 2016. http://www.eia.gov/state/seds/data.cfm?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA.

EPA (U.S. Environmental Protection Agency). 2010. *Construction Fleet Inventory Guide*. EPA-420-B-10-025. Prepared by Eastern Research Group, Inc. July 2010.

EPA. 2014. *Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2014*. EPA-420-S-14-001. October 2014. Accessed September 7, 2016. https://www3.epa.gov/fueleconomy/fetrends/1975-2014/420s14001.pdf.

EPA. 2015. *Program Overview for Renewable Fuel Standard*. Last updated September 28, 2015. Accessed June 21, 2016. https://www.epa.gov/renewable-fuel-standard-program/program-overview-renewable-fuel-standard-program.

EPA and NHTSA (U.S. Environmental Protection Agency and National Highway Traffic Safety Administration. 2010. *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*. EPA–HQ–OAR–2009–0472. NHTSA-2009-0059. http://www.gpo.gov/fdsys/pkg/FR-2010-05-07/pdf/2010-8159.pdf.

EPA and NHTSA (U.S Environmental Protection Agency and National Highway Traffic Safety Administration). 2012. *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*. EPA–HQ–OAR–2010–0799, NHTSA-2010-0131.

SCAG. 2012. *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*. Adopted April 2012. http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx.

SCAG (Southern California Association of Governments). 2016. 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. April 2016. Accessed September 2, 2016. http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

SCE (Southern California Edison). 2016. "Time-of-Use Rates for Business." Accessed September 12, 2016. https://www.sce.com/wps/portal/home/business/tools/time-of-use.

USGBC (U.S. Green Building Council). 2011. "How Does California's Green Building Code Compare to the Industry Benchmark?" by Alex Spliger. Published March 14, 2011. Accessed September 6, 2016. http://usgbclouisiana.org/news/151328/%E2%80%A2%20 http://www.sustainableindustries.com/industries%20%E2%80%A2.

USGBC. 2016. "LEED Credit Library: Energy and Atmosphere." Accessed September 2, 2016. http://www.usgbc.org/credits/new-construction/v4/energy-%26-atmosphere.

VCA Green. 2015. "Title 24 and LEED for Multi-Family: A Practical Approach to Compliance" in *California Green Building Trends.* By Moe Fakih. 2015. Accessed September 6, 2016. http://www.vca-green.com/LEED-and-Title-24-a-Practical-Guide.pdf.

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