4.5 ENERGY RESOURCES

4.5.1 INTRODUCTION

This section of the Draft Environmental Impact Report (Draft EIR) evaluates potential impacts associated with the proposed Inglewood Transit Connector Project (proposed Project) as it relates to energy resources, focusing on the following three resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). The existing energy conditions in the area relevant to electricity, natural gas, and petroleum-based fuels are described, along with the methodology and the regulatory framework that guided the evaluation of energy resources. Impacts to energy resources that would result from the proposed Project are identified.

Appendix F: Energy Conservation[1] of the State California Environmental Quality Act (CEQA) Guidelines identifies the suggested requirements to be considered in an EIR relative to the potential energy impacts of a proposed Project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the proposed Project.

This section addresses the infrastructure capacity and demand associated with the energy consumption of the proposed Project, energy conservation and sustainability measures that may be included in the proposed Project. The City of Inglewood (City) has developed a set of broad sustainability strategies to be incorporated into the design, construction, and operations of each proposed Project component. The proposed Project would incorporate a number of sustainability features as listed in **Table 3.0-5: Proposed ITC Sustainability Guidelines**. These measures align with Inglewood's commitment to sustainability Citywide, as outlined in the City's Energy and Climate Action Plan and Energy Efficiency Climate Action Plan. These sustainability guidelines serve as a mechanism to promote the City's commitment to reduce its environmental footprint and promote energy efficient design requirements, water conservation, and water quality improvement projects, natural resource protection efforts, waste reduction and recycling, and numerous air quality emissions reduction policies and programs.

For construction impacts, the City would include in bid documents for the proposed Project language specifying that the future contractors shall use Tier 4 construction equipment on the proposed Project (see **Mitigation Measure MM AQ-1** in **Section 4.2: Air Quality**). For operational impacts, the proposed Project would comply with the requirements of California Green Building Standards Code (CALGreen) and be consistent with the City Energy Efficiency Climate Action Plan policies and programs related to sustainability, energy efficiency, and reduction in GHG emissions. The City has committed to taking an

1 CEQA Guidelines, Appendix F: Energy Conservation.

active role in promoting energy conservation and environmentally-friendly initiatives to improve the environment and realize the co-benefits, which include energy independence, cost savings for energy not used, water saved, improved air quality, and public health benefits from improved air quality.

This section contains: (1) a summary of the federal, State, and local regulations related to energy demand and conservation; (2) a description of the energy consumption from the proposed Project, as well as a description of the Adjusted Baseline Environmental Setting; and (3) an analysis of the potential impacts related to energy demand associated with the implementation of the proposed Project, as well as identification of potentially feasible measures that could mitigate significant impacts.

Energy calculations for this analysis were conducted for existing uses, and proposed Project construction and operation. These calculations are detailed within the following appendices to this Draft EIR:

- **Appendix 3.0.1:** Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition, Lea + Elliot, December 2020
- **Appendix: 4.5.1:** Existing Conditions Energy Calculations
- **Appendix: 4.5.2:** Adjusted Baseline Energy Calculations
- **Appendix: 4.5.3:** Project Construction Energy Calculations
- **Appendix: 4.5.4:** Project Construction Vehicle Fuel Calculations
- **Appendix: 4.5.5:** Project Operational Energy Calculations
- **Appendix: 4.5.6:** Project Operational Vehicle Fuel Calculations

Air quality and greenhouse gas (GHG) emissions associated with energy production—that is, production of electricity and the combustion of fuels—are discussed in the impact analyses in **Sections 4.2: Air Quality** and **4.7: Greenhouse Gas Emissions**. Potential conflicts between the proposed Project and existing utility infrastructure that would result in environmental impacts are discussed in **Section 4.14: Utilities and Service Systems**.

Please see **Section 8.0** for a glossary of terms, definitions, and acronyms used in this Draft EIR.

4.5.2 METHODOLOGY

This analysis compares energy consumption associated with the proposed Project under the Adjusted Baseline conditions as defined in **Section 4.0: Environmental Impact Analysis**, *4.0.5: Adjusted Baseline*. Energy demand for the proposed Project has been estimated based on generation factors for use type or on specifications for similar facilities at other locations and as estimated by the system design engineers

in the Draft Operating Systems Conceptual Report.[2] This analysis also considers the ability of the proposed Project to avoid or reduce energy consumption through conservation programs and efficiency features.

Specific assumptions and data sources needed to quantify energy consumption during both construction and operation are presented in **Section 3.0: Project Description**. The methods and scenarios used for the energy calculations are the same as those used for the air quality emissions calculations, as discussed in **Section 4.2: Air Quality**.

4.5.2.1 Construction

Annual energy use includes mobile sources and energy usage associated with the existing on-site structures that would be removed and replaced with construction of the proposed Project. Existing buildings within the footprint of the proposed Project include approximately 220,000 SF of commercial uses (See **Section 3.0** for a detailed discussion of the existing land uses that would be demolished as part of the proposed Project).

Construction energy consumption would result from transportation fuels (e.g., diesel and gasoline) used for haul trucks, heavy-duty construction equipment, construction workers traveling to and from the proposed Project, electricity consumed to power the construction trailers (lights, electronic equipment, and heating and cooling), and exterior uses such as lights, conveyance of water for dust control, and any electrically-driven construction equipment.

Construction activities could vary substantially from day to day, depending on the specific type of construction activity and the number of workers and vendors that would travel to the proposed Project. This analysis considered these factors and provides the estimated maximum construction energy consumption for the purposes of evaluating the associated impacts on energy resources. The anticipated construction program is discussed in *Section 3.7: Construction* of **Section 3.0**. Further details are provided in **Appendix 3.0.4: ITC Construction Scenarios for the EIR, June 2020**.

Construction fuel use was forecasted by assuming a conservative estimate of construction activities and applying mobile source emission factors. Construction activities are expected to commence in early 2022 and be completed in mid-2026 (i.e., assuming all construction occurs at the earliest feasible date)(see Construction Scenario **Appendix 3.0.4**). If, for various site planning, financial, or other reasons, the onset of construction is delayed to a later date than assumed in the analysis, construction impacts would be similar to or less than those analyzed, because more energy efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future. This is due to the In-Use Off-Road Diesel-

2 Lea+Elliott, Inc. *Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition* - December 2020 (See **Appendix 3.0.1**).

Fueled Fleets Regulation implemented by the California Air Resources Board (CARB) that requires construction equipment fleet operators to phase-in less polluting heavy-duty equipment and trucks over time.[3]

Construction electricity use was estimated for a temporary construction office, for construction equipment that would use electricity as an alternative to diesel fuel, and for water usage from dust control activities. The CalEEMod emissions model, described further in **Sections 4.2: Air Quality**, was used to estimate the proposed Project's emissions of criteria air pollutants, and was also used to estimate electricity, natural gas, and water use. The same model used for air quality analyses was also used for the purpose of estimating energy use.

The construction office was assumed to be two 2,500 SF trailers and was modeled using the CalEEMod land use category for "General Office." Electricity demand by construction equipment was estimated using default horsepower (hp) and load factors from CalEEMod and hours of operation per day.[4] The total horsepower-hours (hp-h) were then converted to kilowatt-hours (kWh) using a standard conversion factor.

The electricity demand under existing that will be removed was then subtracted from the construction electricity use to determine the net electricity use during construction of the proposed Project.

Natural gas would not be consumed in large quantity during construction of the proposed Project because construction offices would not be heated with natural gas, and construction equipment and vehicles would be primarily powered by either diesel, gasoline, or electricity.

Transportation fuels would be consumed for transportation of construction workers and materials to and from the proposed Project, and operation of construction equipment throughout the construction phases. Fuel consumption from on-site heavy-duty construction equipment was calculated based on the equipment mix estimated in the Construction Scenario (see **Appendix 3.0.4**). The total hp was then multiplied by fuel usage estimates per hp-h from the CARB off-road vehicle (OFFROAD) model.[5]

Fuel consumption from construction on-road worker, vendor, and delivery/haul trucks was calculated using the trip rates and distances consistent with the air quality emissions modeling worksheets and CalEEMod construction output files (see **Section 4.2**). Total vehicle miles travelled (VMT) for these on-road vehicles were then calculated for each type of construction-related trip and divided by the corresponding County-specific miles per gallon factor using the CARB EMFAC2017 model. The model was used to

3 California Air Resources Board, 2010. In-Use Off-Road Diesel-Fueled Fleets Regulation. December 2010, revised October 2016.

4 South Coast Air Quality Management District, 2017. CalEEMod® Users Guide Appendix D: Default Data Tables. October 2017.

5 California Air Resources Board, 2017. Off-Road Diesel Emission Factor Update for NO_x and PM. 2017.

calculate fuel consumed based on the total annual VMT for each vehicle type. A combination of CalEEMod assumed trip lengths and client-provided specific trip lengths were used for worker commutes, vendor and concrete trucks, and haul truck trips (see **Appendix 3.0.4**). Consistent with CalEEMod, construction worker trips were assumed to include a mix of light duty gasoline automobiles and light duty gasoline trucks. Construction vendor trucks were assumed to be a mix of medium-heavy duty and heavy duty diesel trucks and concrete and haul trucks were assumed to be heavy-duty diesel trucks.

The energy usage required for construction of the proposed Project was estimated based on the number and type of construction equipment that would be used during construction by assuming a conservative estimate of construction activities (i.e., maximum daily equipment usage levels) (see **Appendix 3.0.4**). Energy for construction-worker commuting trips was estimated based on the predicted number of workers for the various phases of construction, and the estimated VMT based on the conservative values in the CalEEMod and EMFAC2017 models. The assessment also includes a discussion of the proposed Project compliance, with relevant energy-related regulatory requirements and incorporation of design features discussed in **4.7: Greenhouse Gas Emissions**, which would minimize the amount of energy usage during construction. These measures are also discussed in **Section 3.0**.

The estimated fuel economy for heavy-duty construction equipment was based on fuel consumption factors from the CARB OFFROAD emissions model, which is a State-approved model for estimating emissions from off-road heavy-duty equipment. The estimated fuel economy for haul trucks, vendor trucks, concrete trucks, and worker commute vehicles was based on fuel consumption factors from the CARB EMFAC 2017 emissions model, which is a State-approved model for estimating emissions from on-road vehicles and trucks.

4.5.2.2 Operation

Operational energy impacts were assessed based on the increase in energy demand compared to existing conditions described. Operation of the proposed Project would include implementation of a number of sustainability measures as noted in **Table 3.0-5**.

Operational energy associated with the existing uses to be demolished were subtracted from the total operations of the proposed Project to calculate the net energy consumed. Within the CalEEMod software, building electricity and natural gas usage rates were adjusted to account for prior Title 24 Building Energy Efficiency Standards for the existing uses.[6] As stated previously, the net change in operational energy demand was based on the difference between the existing baseline condition energy demand and the energy demand of the proposed Project at full buildout. The following discusses only the methodology for

6 *California Air Resources Board, 2016. CalEEMod® Users Guide,* Appendix E, Section 5. September 2016. Factors for the prior Title 24 standard are extrapolated based on the technical source documentation.

the new operations at the proposed Project's Maintenance and Storage Facility (MSF), traction power substations (TPSSs), stations, and train operations as detailed in the Draft Operating Systems Conceptual Report.[7]

The proposed Project operational natural gas demand would be generated mainly by building heating/cooling of the MSF and stations. The proposed Project estimated natural gas demand was analyzed relative to Southern California Gas Company (SoCalGas) existing and planned energy supplies in 2026 (i.e., the proposed Project buildout year)[8] to determine whether the utility would be able to meet the proposed Project energy demands. Furthermore, natural gas demand generated by the existing uses to be demolished were calculated using demand factors provided in CalEEMod and subtracted from the proposed Project natural gas demand to obtain the net annual natural gas demand.

Mobile source fuel consumption for the proposed Project during operation would include event-day trips related to commute trips by employees and suppliers.

4.5.3 REGULATORY FRAMEWORK

4.5.3.1 Federal Regulations and Directives

Energy Policy and Conservation Acts

The Federal Energy Policy and Conservation Act of 1975,[9] the Federal Energy Policy Act of 2005,[10] and the Energy Independence and Security Act of 2007[11] require the US Department of Energy (USDOE) to set electrical efficiency standards of various appliances, fixtures, and equipment.

The Energy Independence and Security Act of 2007 includes standards for an increased Corporate Average Fuel Economy standard of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by the 2020 model year, in addition to provisions for Renewable Fuel Standard, Appliance and Lighting Efficiency Standards, and Building Energy Efficiency. The Act includes standards for general service lighting that will require lightbulbs to consume 60 percent less energy by 2020. This standard is leading to the phasing out of incandescent lightbulbs to be replaced by more efficient lighting. Additional provisions of the Act address energy savings in government and public institutions; promote research for alternative energy, carbon capture, and international energy programs; and create green jobs.

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7 Lea+Elliott, Inc. Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition - *December 2020* (See Appendix 3.0.1).

8 California Gas and Electric Utilities, 2018. *2018 California Gas Report, 2018.* While the estimated life of the proposed Project would be 30 years, comparison to the analyzed first full operational year of 2026 provides a conservative analysis as supply projections for electricity and natural gas increase in future years.

9 Energy and Policy Conservation Act (EPCA) (Pub. Law 94–163, 89 Stat. 871, enacted December 22, 1975).

10 42 USC §13201 et seq. (2005).

11 Public Law 110-140 (2007).

Corporate Average Fuel Economy Standards

Established by the US Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards[12] reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and United States Environmental Protection Agency (USEPA) jointly administer CAFE standards. The US Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given to: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[13]

US Department of Transportation, US Department of Energy, and US Environmental Protection Agency Influence on Transportation Energy

On the federal level, the US Department of Transportation (USDOT), USDOE, and USEPA are three agencies with substantial influence over energy policies related to transportation fuels consumption. Generally, federal agencies influence transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure projects.

4.5.3.2 State Regulations and Directives

California Public Utilities Commission

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

12 For more information on the CAFE standards, refer to https://www.nhtsa.gov/laws-regulations/corporate-averagefuel-economy.

13 US Environmental Protection Agency, 2016. Federal Register/Vol. 81, No. 206/Tuesday, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2. October 25, 2016.

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

In 2008, the CPUC adopted the Long Term Energy Efficiency Strategic Plan, which is a road map to achieving maximum energy savings in California through 2020.[14] Consistent with California's energy policy and electricity "loading order," the Energy Efficiency Strategic Plan indicates that energy efficiency is the highest priority resource in meeting California's energy needs. The CPUC also adopted energy goals that require all new residential construction in California to be zero net energy by 2020. The zero net energy goal means new buildings must use a combination of improved efficiency and distributed renewable energy generation to meet 100 percent of their annual energy need. In addition to the zero net energy goals for residential buildings by 2020, the CPUC has adopted goals that all new commercial construction in California will be zero net energy by 2030 and 50 percent of existing commercial buildings will be retrofit to zero net energy by 2030.

California Energy Commission

The CEC is primary energy policy and planning agency in California. Created by the California Legislature in 1974, the CEC has five major responsibilities: (1) forecasting future energy needs and keeping historical energy data; (2) licensing thermal power plants 50 MW or larger; (3) promoting energy efficiency through appliance and building standards; (4) developing energy technologies and supporting renewable energy; and (5) planning for and directing State response to energy emergencies.

Senate Bill 1389

Senate Bill (SB) 1389 requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the electricity, natural gas, and transportation fuel sectors in California, and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State economy; and protect public health and safety.[15]

The 2017 Integrated Energy Policy Report[16] provides the results of the CEC assessments of a variety of energy issues facing California, including energy efficiency, strategies related to data for improved

14 CPUC, *Long Term Energy Efficiency Strategic Plan.* 2008

15 SB 1389, (PRC sections 25300–25323)

16 *Final 2017 Integrated Energy Policy Report,* Adopted February 21, 2018, Accessed July 13, 2020 https://efiling.energy.ca.gov/getdocument.aspx?tn=223205.

decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on the California energy system, achieving 50 percent renewables by 2030, the California Energy Demand Forecast, the Natural Gas Outlook, the Transportation Energy Demand Forecast, Alternative and Renewable Fuel and Vehicle Technology Program benefits updates, an update on electricity infrastructure in Southern California, an update on trends in California sources of crude oil, and an update on other energy issues.

California Green Building Standards Code

Adopted in 2010, and updated annually, CALGreen is found in Part 11, Title 24 of the CCR.[17] The purpose of CALGreen is to cause a reduction in GHG emissions; promote environmentally responsible, cost effective, healthier places to live and work; and reduce energy and water consumption. CALGreen identifies mandatory building measures and voluntary measures that may be incorporated into the design of buildings. CALGreen establishes voluntary and mandatory standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality.

The 2019 CALGreen Code took effect January 1, 2020. CALGreen requires every new building constructed in California to reduce water consumption by 20 percent, divert 65 percent of construction waste from landfills, and install low-pollutant-emitting materials. It also requires separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects and mandatory inspections of energy systems (e.g., heat furnace, air conditioner, and mechanical equipment) for nonresidential buildings larger than 10,000 SF to ensure that all are working at their maximum capacity and according to their design efficiencies.

Senate Bill 350, Clean Energy and Pollution Reduction Act of 2015

SB 350, the Clean Energy and Pollution Reduction Act of 2015, requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030; thereby doubling energy efficiency within the State.[18] SB 350 makes revisions to the California Renewable Portfolio Standards (RPS) Program and to certain other requirements on public utilities and publicly owned electric utilities. SB 350 also requires local, publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction consistent with a Statewide goal established by the California Public Utilities Commission and provides incentives for electrification of rail facilities. Local utilities would be required to develop more

17 California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)
18 SB 350, Clean Energy and Pollution Reduction Act.

detailed strategies and incentives for use of renewable energy sources, resulting in an increased demand for renewable energy generation.

SB 350 emphasizes the important role of electric vehicles in California's overall scheme to combat climate change, declaring that "[d]employing electric vehicles should assist in grid management, integrating generation from eligible renewable energy resources, and reducing fuel costs for vehicle drivers." The bill (1) promotes the development of additional electric vehicle charging infrastructure to encourage greater use of electric cars; and (2) requires electrical utilities to include expansion of electrical vehicle charging facilities as part of their strategies and incentives for reducing overall energy consumption.

Assembly Bill 32

In 2006, Governor Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006,[19] which focused on reducing GHG emissions in California to 1990 levels by 2020. CARB has the primary responsibility for reducing the GHG emissions in California; however, AB 32 also tasked the CEC and CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

AB 1007

AB 1007[20] required the CEC to prepare a State plan (State Alternative Fuels Plan) to increase the use of alternative fuels in California. The Commission prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other State, federal, and local agencies. The final State Alternative Fuels Plan,[21] published in December 2007, attempts to achieve an 80 percent reduction in GHG emissions associated with personal transportation, even as California's population increases.

SB 1368, Performance Standard for Baseload Power Generation

SB 1368 (Chapter 598, Statutes of 2006), Performance Standard for Baseload Power Generation,[22] required the CPUC to establish a GHG emissions performance standard for "baseload" generation from investor-owned utilities of 1,100 pounds of carbon dioxide per megawatt hour (MWh). The CEC established a similar standard for local publicly owned utilities. All electricity provided to California, including imported electricity, must be generated from plants that meet or exceed this standard.

19 Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (codified in the California Health and Safety Code (HSC), Division 25.5.

20 AB 1007, Pavley, Chapter 37I, Statutes of 2005.

21 State Alternative Fuels Plan.

22 SB 1368 - Emission Performance Standards, Perata, Chapter 598, Statutes of 2006.

SB X1-2, Renewable Portfolio Standard

California law (SB X1-2, Statutes of 2011) requires retail suppliers of electricity to source at least 33 percent of annual retail sales from eligible renewable energy sources by 2020.[23]

Executive Order S-03-05

Executive Order S-03-05 mandates that California emit 80 percent fewer GHGs in 2050 than it emitted in 1990.[24] Energy efficiency and reduced VMT would play important roles in achieving this goal.

Executive Orders S-14-08 and S-21-09

Since 2006, California has had a mandate to increase the use of renewable generation to 20 percent of retail electricity sales by 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which raises California's renewable energy goals to 33 percent by 2020.[25] This enhanced target is intended to help California meet Statewide GHG emission reduction targets. This has been reiterated by California Executive Order S21-09 which charged CARB to establish a regulation consistent with this 33 percent target by 2020.[26] This represented an increase in RPSs over SB 1078[27] and SB 107.[28] State RPSs have since been expanded with SB 350.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10-percent total reduction in 2020.[29] Petroleum importers, refiners, and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions.[30] The measure applies to

23 SB X1-2, Statutes of 2011.
24 California Executive Order S-03-05, June 2005.
25 California Executive Order S-14-08, November 2008.
26 California Executive Order S-21-09, September 2009.
27 SB 1078, Chapter 516, Statues of 2002.
28 SB 107, Chapter 325, Statues of 2015.
29 California Executive Order S-01-07, January 2007.
30 CARB, *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling,* Title 13 CCR section 2485. 2004.

diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel fueled commercial vehicles from idling for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to diesel particulate matter emissions and criteria pollutant emissions from stationary diesel-fueled compression ignition (CI) engines.[31] The measure applies to any person who owns or operates a stationary CI engine in California with a rated brake horsepower greater than 50, or anyone who either sells, offers for sale, leases, or purchases a stationary CI engine. This measure outlines fuel and fuel additive requirements; emission standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for CI engines.

Regulation to Reduce Emissions of Diesel Particulate Matter, Nitrogen Oxides, and Other Criteria Air Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

California Environmental Quality Act

Under CEQA,[32] EIRs are required to include a discussion of the potential significant energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. If the analysis of a project shows that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, then the EIR must identify mitigation measures to address that energy use. This analysis should include the project energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project.[33] CEQA Guidelines, Appendix F,

31 CARB. Airborne Toxic Control, Title 17 CCR section 93115, 2004.
32 CEQA, PRC section 21100(b)(3).
33 CEQA Guidelines section 15126.2(b).

provides a list of energy-related topics that should be analyzed in the EIR, and more specifically provides the following topics for consideration in the evaluation of energy impacts in an EIR. Appendix G of the CEQA Guidelines also addresses energy impacts.

4.5.3.3 Regional Regulations and Directives

Southern California Association of Governments

The SCAG 2020–2045 RTP/SCS[34] is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level. Although the RTP/SCS is not technically an energy efficiency plan, consistency with the RTP/SCS has energy implications, including the reduction of VMT which reduces GHG emissions and has the co-benefit of reducing fossil fuel consumption from travel to and from a project.

4.5.3.4 Local Regulations and Directives

Inglewood General Plan

The City General Plan does not contain any policies, regulations, or directives that specifically address energy resources.

There are no goals and policies in the General Plan that directly address energy demand and conservation. However, the following goals from the Land Use Element of the City General Plan are relevant to transportation-related energy demand and conservation.[35]

Circulation Goal: Promote and support adequate public transportation within the City and the region.

Circulation Goal: Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

34 Southern California Association of Governments (SCAG), *Connect SoCal: 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies Draft,* "Chapter 1," https://www.connectsocal.org/Pages/Connect-SoCal-Draft-Plan.aspx, Accessed on July 10, 2020.

35 City of Inglewood, Department of Community Development and Housing, 1980. *Land Use Element of the Inglewood General Plan*. January 1980. Amended September 14, 2016.

Inglewood Energy and Climate Action Plan

The City adopted an Energy and Climate Action Plan[36] (ECAP) in 2013 to guide Citywide GHG emissions reduction efforts. The ECAP established four primary compliance paths which projects may choose to adhere to, including: ministerial and exempt project status, implementation of a combination of sustainable development standards, performance-based compliance, or payment of an in-lieu fee. These measures were developed on a points-based system, which were chosen because they have been demonstrated by various studies to directly reduce GHG emissions or support changes in activities that lead to GHG emissions reductions. Each Climate-Ready Development Standard has a point value associated with it that reflects its general effectiveness at reducing GHG emissions. The standards apply to various types of projects, and a qualifier is included denoting which types of projects may implement the standard. Applicants have discretion regarding which measures that they would want their project to comply with; however, for a project to be fully compliant with the goals of the ECAP it must incorporate features meeting the standards sufficient to accrue a total of 20 points. The ECAP contains the following:

- Emissions Inventory: Expands the City's 1990, 2005, and 2007 greenhouse gas inventory to include an inventory of 2010 emissions. The ECAP also includes a year 2010 inventory of electricity and natural gas consumed.
- Emissions Reduction Target/Goal: Establishes a 2020 emissions reduction target of 15 percent below 2005 levels and a 2035 emission reduction goal of 32.5 percent below 2005 levels.
- Emission Reduction Strategies: The ECAP contains energy and greenhouse gas emissions reduction strategies. Particular attention is provided to budget-neutral measures that will reduce the community-wide energy consumption and greenhouse gas emissions in order to meet the statewide emissions targets identified in the ARB's Scoping Plan and Executive Order S-03-05.
- Implementation Program: Identifies the timeline for implementing each strategy, relative cost, and any additional analysis and/or legislative action needed.
- Streamlined CEQA Review: The ECAP serves as a tiering document for the streamlined review of project-level greenhouse gas emissions under CEQA for projects proposed within the City's jurisdiction.

Inglewood Energy Efficiency Climate Action Plan

The City developed an Energy Efficiency Climate Action Plan[37] (EECAP) in December 2015 that evaluates both energy and GHG emissions. In addition, the Inglewood EECAP is a roadmap for achieving community-

36 City of Inglewood, *Inglewood Energy and Climate Action Plan*, March 2013, https://www.cityofinglewood.org/DocumentCenter/View/148/Inglewood-Energy-and-Climate-Action-Plan-ECAP-Adopted-2013-PDF, accessed July 30, 2020.

37 City of Inglewood, *Energy Efficiency Climate Action Plan,* December 2015, https://www.southbaycities.org/sites/default/files/EECAP_Inglewood_Final_20151218.pdf.

wide energy and GHG emissions reductions that encourages the City to grow more sustainably. The EECAP includes the following: an energy and GHG emissions inventory, reduction target/goal, reduction and efficiency strategies, and an implementation program. The EECAP sets forth six general goals for community GHG reduction: (1) increase energy efficiency in existing residential units, (2) increase energy efficiency in new residential development, (3) increase energy efficiency in existing commercial units, (4) increase energy efficiency in new commercial development, (5) increase energy efficiency though water efficiency, and (6) decrease energy demand though recuing urban heat island effect. Additionally, the EECAP sets forth four general goals for municipal GHG reduction: (1) participate in education, outreach, and planning for energy efficiency, (2) increase energy efficiency in municipal buildings, (3) increase the energy efficiency in city infrastructure, (4) reduce energy consumption in the long term.

Other Location Conservation Initiatives

The Southern California Edison Company (SCE) and SoCalGas provide several programs for energy customers in Inglewood to conserve energy. Programs include Consumer Rebate Programs, a Refrigerator Turn-In and Recycling Program, Green Power Program, Outdoor Area Lighting Program, Solar Power Incentives, Power Quality Consulting Programs, and Electric Vehicle Programs. Programs include: Commercial Lighting Efficiency Offer (CLEO), Heating, Ventilation and Air Conditioning (HVAC) Rebate Program, Customer Generation Rebate, Technical Assistance Program, Premium Efficiency Motors (PEM) Program, Chiller Efficiency Program, Energy Load Monitoring (ELM) Program, and Financing Programs. Programs for nonresidential customers include rebates on energy efficient HVAC systems and refrigeration equipment, customer generation rebates, energy-load monitoring, energy-efficiency financing, and solar power initiatives.

4.5.4 EXISTING CONDITIONS

4.5.4.1 Electricity

Electrical power within the City is supplied by SCE, which serves approximately 15 million people in a 50,000-square-mile service area.[38] The SCE service area used approximately 78,445,000 MWh of electricity in 2018.[39] SCE produces and obtains electricity from various generating sources that utilize coal, nuclear, natural gas, hydroelectric, and renewable resources to generate power.

38 Southern California Edison, "Newsroom Fact Sheet," April 29, 2019, accessed July 2020, https://newsroom.edison.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/166/files/20193/SCE%20Service%20Area%20Fact%20Sheet_Ver2_04252019.pdf

39 Southern California Edison, "Electric Company ESG/Sustainability Quantitative Information," November 4, 2019, accessed July 2020, https://www.edison.com/content/dam/eix/documents/sustainability/2019-eix-esg-pilot-quantitative-section-sce.pdf.

In 2012, the latest year of publicly available data, the City consumed a total of approximately 434,308 MWh of electricity, an approximately 16 percent reduction from 2005.[40] Based on building type, single- and multifamily residential units consumed the most electricity at approximately 164,000 MWh, followed by industrial at 62,000 MWh, and commercial at approximately 24,000 MWh.[41] This compares with the total amount of built space for each building type, with multifamily residential units constituting the greatest square footage, followed by single-family residential, commercial, other, industrial, condominium residential, institutional, and mixed building types. The SCE estimates that electricity consumption within its planning area will be approximately 122,500 GWh annually by 2026.[42]

In Downtown Inglewood's residential neighborhoods, existing electrical facilities consist of an overhead electrical system, including poles carrying low voltage conduits along with telecommunication and cable TV facilities. In most of the commercial and industrial areas in the Inglewood Downtown area, the existing electrical networks are underground within all the streets.[43]

Southern California Edison is currently in the process of rehabilitating the 39 circuits that serve the City to ensure system reliability. The rehabilitation process includes equipment replacement, safety upgrades, and installation of alternate sources of power.[44]

4.5.4.2 Natural Gas

SoCalGas is the natural gas purveyor within the City. The SoCalGas service area reaches 21.8 million consumers through 5.9 million meters in more than 500 communities, covering an area of approximately 24,000 square miles throughout Central and Southern California.[45]

In 2012, the latest year of publicly available data, the City consumed a total of approximately 1,900 MMcf per year.[46] Based on building type, single- and multifamily residential units consumed the most natural gas at approximately 1,363 MMcf in 2012, a 4.2 percent reduction from 2005. Commercial and industrial uses consumed approximately 536 MMcf in 2012, a 16.8 percent reduction from 2005.[47] This compares with the total amount of built space for each building type, with multifamily residential units constituting

40 South Bay Cities Council of Governments, *Supplemental Energy Climate Action Plan: City of Inglewood*, 2018, accessed June 23, 2020, https://www.southbaycities.org/sites/default/files/Inglewood%20CAP.pdf.
41 City of Inglewood, *Energy Efficiency Climate Action Plan*, December 2015, accessed June 2020, http://www.southbaycities.org/sites/default/files/EECAP_Inglewood_Final_20151218.pdf.
42 CEC, Demand Analysis Office, *California Energy Demand 2018-2030 Revised Forecast*, Accessed May 2020, https://efiling.energy.ca.gov/getdocument.aspx?tn=223244.
43 John M. Cruikshank Consultants, Inglewood Planning Services for Transit Oriented Development, *Existing Infrastructure Baseline Data,* June 30, 2015.
44 Southern California Edison, *Circuit Reliability Review-Inglewood (2020)*, accessed July 16, 2020, https://library.sce.com/content/dam/sce-doclib/public/reliability/Inglewood.pdf
45 SCG, "Company Profile," Accessed May 2020, https://www.socalgas.com/about-us/company-profile.
46 City of Inglewood, *Energy Efficiency Climate Action Plan*.
47 City of Inglewood, *Energy Efficiency Climate Action Plan*.

the greatest square footage, followed by single-family residential, commercial, other, industrial, condominium residential, institutional, and mixed building types.

The SoCalGas planning area had an available natural gas capacity of 3,055 million cubic feet (MMcf) in 2018.[48] Natural gas capacity within SoCalGas' planning area is anticipated to be approximately 3,775 MMcf per day (or 1,377,875 million MMcf per year) in 2026, which is the opening year of the proposed Project.[49]

SoCalGas projects total gas demand to decline at an annual rate of 0.4 percent from 2018 to 2035.[50] This is due to the combination of a 0.9 percent annual decline in the core market and an annual decline of 0.2 percent in the noncore market. In comparison to the 2018 data, the 2016 California Gas Report estimated a declining annual average rate of 0.6 percent per year, based on a 0.3 percent annual decline in the core market and a 0.9 percent annual decline in the noncore market. The decline in demand is due to modest economic growth; mandated energy efficiency standards; regulations such as the California Green Building Code; renewable electricity goals; the decline in commercial and industrial demands; and conservation savings linked to Advanced Metering Infrastructure, which uses information technology and two-way communication to modulate price and demand activity.

4.5.4.3 Petroleum-Based Fuel (Transportation Energy)

Crude oil is a mixture of hydrocarbons that exists as a liquid in underground geologic formations and remains a liquid when brought to the surface.[51] Petroleum products are produced from the processing of crude oil and other liquids and include transportation-related fuels such as gasoline and diesel. Petroleum is a worldwide commodity. According to the US Energy Information Administration (EIA), California consumed approximately 681,272,000 barrels (28,613,424,000 gallons, or 42 gallons per barrel) in 2018, the most recent year of publicly available data.[52] The EIA forecasts the national supply and demand in its Annual Energy Outlook 2020.[53] The EIA forecasts a national oil supply of 20.0 million barrels per day

48 California Gas and Electric Utilities, *2018 California Gas Report,* Accessed May 2020, https://www.sdge.com/sites/default/files/regulatory/2018%20California%20Gas%20Report.pdf.

49 California Gas and Electric Utilities, *2018 California Gas Report,* Accessed May 2020, https://www.sdge.com/sites/default/files/regulatory/2018%20California%20Gas%20Report.pdf.

50 The California Gas and Electric Utilities, *2018 California Gas Report*, "Gas Demand," 36.

51 U.S. Energy Information Administration (EIA), "Frequently Asked Questions," Accessed May 2020, https://www.eia.gov/tools/faqs/faq.php?id=40&t=6.

52 U.S. EIA, *Independent Statistics & Analysis*, "Table F16: Total Petroleum Consumption Estimates," 2018, Accessed May 2020, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US.

53 U.S. EIA, *Annual Energy Outlook 2020*, Accessed May 2020, https://www.eia.gov/outlooks/aeo/.

(mb/d) in 2026, which is the opening year for the proposed Project.[54] This equates to approximately 7,304 million barrels per year (mb/y) or 306,768 million gallons per year (mg/y).[55]

Recent data shows that the transportation sector accounts for a majority of California's petroleum consumption.[56] In 2018, the most recent year of publicly available data, California consumed approximately 583,547,000 barrels (24,508,974,000 gallons, or 42 gallons per barrel) of petroleum for transportation.[57]

According to CARB's EMFAC Web Database, the Los Angeles region on-road transportation sources consumed 4.19 billion gallons of gasoline and 0.62 billion gallons of diesel fuel in 2018.[58] During 2019, the production of gasoline in California averaged approximately 307 million gallons per week, and the production of diesel within California averaged approximately 106 million gallons per week.[59] Over the last several decades, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs emissions from the transportation sector, and reduce vehicle travel. Incentive programs, such as the CEC's Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), are helping the State to reduce its dependency on gasoline. The CEC predicts that the demand for gasoline will continue to decline over the upcoming years, and there will be an increase in the use of alternative fuels.[60]

4.5.4.4 Existing Energy Use Within the Project Footprint

The proposed Project is located within a developed area which utilizes energy supply for a variety of land uses. There are several existing developments which contribute to existing electricity demand that would be demolished as part of the proposed Project.

Presently, a variety of commercial, restaurant, and retail uses exist where the proposed Market Street/Florence Avenue Station would be constructed (approximately 126,912 SF of operational space) and the proposed MSF site (a 76,402 square-foot grocery store and 202 square-foot gas station). The proposed Project would also include the demolition of 16,575 SF of retail space located at 150 S. Market Street. These existing uses currently generate electricity and natural gas demand for building operation.

54 U.S. EIA, *Annual Energy Outlook 2020*, "Table 11. Petroleum and Other Liquids Supply and Disposition," Accessed May 2020, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0.

55 One oil barrel is equivalent to 42 gallons.

56 U.S. EIA, *Independent Statistics & Analysis*, "Table F16: Total Petroleum Consumption Estimates," 2018, Accessed May 2020, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US.

57 U.S. EIA, *Independent Statistics & Analysis, "*Table F16: Total Petroleum Consumption Estimates," 2018, Accessed May 2020, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US.

58 California Air Resources Board, *EMFAC2017 Web Database,* www.arb.ca.gov/emfac/2017/

59 California Energy Commission, "2019 Weekly Fuels Watch Report," accessed July 1, 2020.

60 CEC, *Final 2019 Integrated Energy Policy Report,* Accessed May 2020, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report.

Table 4.5-1: Annual Energy Demand of Existing Uses within the Proposed Project Footprint lists the existing energy demand for the existing uses. As shown, the existing uses currently consume approximately 5,110,987 kWh of electricity per year. Moreover, the existing uses currently consume 5,412,676 thousand British thermal units (kBTU) (or 5.2 MMcf)[61] of natural gas per year.

61 The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

Table 4.5-1
Annual Energy Demand of Existing Uses within the Proposed Project Footprint

Parcel No.	Property Address	Existing Use	Square Footage	Annual Energy Demand	Units
Electricity					kWh/yr
4015-027-030	310 E. Florence Ave	Restaurant	1,200 SF	43,776	kWh/yr
4015-027-031	300 E. Florence Ave	Restaurant	4,762 SF	173,645	kWh/yr
4015-027-032	254 N. Market St	Restaurant	4,608 SF	168,173	kWh/yr
4015-027-033	250 N. Market St	Auto Service	44,000 SF	371,800	kWh/yr
4015-027-038	240 N. Market St	Shopping Center	12,300 SF	140,712	kWh/yr
4015-027-040	230 N. Market St	Store	22,194 SF	253,854	kWh/yr
4015-027-041	224 N. Market St	Store	5,000 SF	84,084	kWh/yr
4015-027-049	222 N. Market St	Shopping Center	25,500 SF	189,561	kWh/yr
4015-027-050	210 N. Market St	Shopping Center	7,348 SF	57,200	kWh/yr
4021-010-015	150 S. Market St	Store	16,575 SF	291,720	kWh/yr
4021-024-015	500 E. Manchester Blvd	Supermarket	76,402 SF	2,950,570	kWh/yr
4021-024-015	510 E. Manchester Blvd	Gas Station	202 SF	1,707	kWh/yr
	—	Water Conveyance	—	384,185	kWh/yr
Electricity Total				**5,110,987**	**kWh/yr**
Natural Gas					
4015-027-030	310 E. Florence Ave	Restaurant	1,200 SF	311,184	kBTU/yr
4015-027-031	300 E. Florence Ave	Restaurant	4,762 SF	1,234,360	kBTU/yr
4015-027-032	254 N. Market St	Restaurant	4,608 SF	1,195,470	kBTU/yr
4015-027-033	250 N. Market St	Auto Service	44,000 SF	919,600	kBTU/yr
4015-027-038	240 N. Market St	Shopping Center	12,300 SF	24,600	kBTU/yr
4015-027-040	230 N. Market St	Store	22,194 SF	44,380	kBTU/yr
4015-027-041	224 N. Market St	Store	5,000 SF	10,000	kBTU/yr
4015-027-049	222 N. Market St	Shopping Center	25,500 SF	51,000	kBTU/yr
4015-027-050	210 N. Market St	Shopping Center	7,348 SF	14,700	kBTU/yr
4021-010-015	150 S. Market St	Store	16,575 SF	33,140	kBTU/yr
4021-024-015	500 E. Manchester Blvd	Supermarket	76,402 SF	1,570,020	kBTU/yr
4021-024-015	510 E. Manchester Blvd	Gas Station	202 SF	4,222	kBTU/yr
Natural Gas Total				**5,412,676**	**kBTU/yr**

*Source: Refer to **Appendix 4.5.1** for detailed calculations.*
Notes: kWh/yr = kilowatt-hours per year; kBtu/yr = thousand British Thermal Units per year.
Electricity and natural gas for the existing uses is total yearly operational usage.

4.5.5 ADJUSTED BASELINE

This section assumes the Adjusted Baseline Environmental Setting as described in **Section 4.0**, *4.0-5: Adjusted Baseline*. Specifically, operation of land uses included in the Hollywood Park Specific Plan (HPSP) would result in the consumption of energy resources such as electricity, natural gas, and transportation fuels. Similar to the proposed Project, the HPSP would utilize SCE and SoCalGas for electricity and natural gas supplies and infrastructure. As such, SCE and SoCalGas would be responsible for providing adequate electricity and natural gas supplies for the HPSP project. Moreover, the HPSP would increase the number of vehicles traveling to and from the HPSP site, thus increase the consumption of transportation related fuels. **Table 4.5-2: Adjusted Baseline Annual Energy Demand** shows the Adjusted Baseline energy demand for electricity and natural gas. As shown, the Adjusted Baseline conditions would consume approximately 16,507,545 kWh of electricity per year and 8,883,620 kBTU (or 8.6 MMcf)[62] of natural gas per year. Vehicle fuel usage for the Adjusted Baseline is discussed further under **Impact E-1**.

Table 4.5-2
Adjusted Baseline Annual Energy Demand

Land Use	Square Footage	Annual Energy Demand	Units
Electricity			kWh/yr
General Office	466,000 SF	6,519,340	kWh/yr
Apartments	314,000 SF	1,248,240	kWh/yr
Retail	518,080 SF	5,926,840	kWh/yr
Water Conveyance	—	2,813,125	kWh/yr
Electricity Total		**16,507,545**	**kWh/yr**
Natural Gas			kBTU/yr
General Office	466,000 SF	4,259,240	kBTU/yr
Apartments	314,000 SF	3,588,220	kBTU/yr
Retail	518,080 SF	1,036,160	kBTU/yr
Natural Gas Total		**8,883,620**	**kBTU/yr**

*Source: Refer to **Appendix 4.5.2** for detailed calculations.*
Notes: kWh/yr = kilowatt-hours per year; kBtu/yr = thousand British Thermal Units per year.
Electricity and natural gas for the existing uses is total yearly operational usage.

62 The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

4.5.6 THRESHOLDS OF SIGNIFICANCE

Criteria outlined in Appendix G of the State CEQA Guidelines were used to determine the level of significance of energy impacts. A project would have a significant impact in relation to energy if it were to:

Threshold E-1 **Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.**

Threshold E-2 **Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.**

4.5.7 IMPACT ANALYSIS FOR THE PROPOSED PROJECT

The environmental impact analysis presented below is based on determinations made in the Initial Study (IS) for impacts considered to be potentially significant.

Impact E-1: **Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?**

Implementation of the proposed Project will require the consumption of energy resources during both construction and operation.

For construction impacts, the City would include in bid documents for the proposed Project language specifying that the contractors shall use Tier 4 construction equipment (see **Mitigation Measure MM AQ-1** in **Section 4.2: Air Quality**). For operational impacts, the proposed Project would comply with the requirements of CALGreen[63] and be consistent with the City Energy Efficiency Climate Action Plan[64] involving policies and programs related to sustainability, energy efficiency, and reduction in GHG emissions. In addition, the ITC Design Guidelines, contained in **Appendix 3.0.5**, include sustainability guidelines included that define a list of green measures to be incorporated into the design, construction, and operations of the ITC facilities. The ITC project will be designed and constructed to achieve Silver Award Certification under the Envision™ Sustainable Infrastructure Rating System.

Individual measures are identified in the areas of site design, energy efficiency, water efficiency, material conservation, and environmental quality. These measures illustrate the City's sustainability considerations including, but not limited to, the measures necessary to meet the certifications referenced above. These

63 *California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen).*
64 City of Inglewood, *Energy Efficiency Climate Action Plan,* December 2015.

guidelines apply to the APM guideway and stations, passenger walkways, parking areas, and all other components of the ITC.

Buildings included as part of the Project will incorporate vegetated open space area equal to 30 percent of the total project area. Projects must meet County of Los Angeles and City of Inglewood Low Impact Design (LID) requirements to treat stormwater. Preferential parking for green vehicles and provisions to accommodate electric charging stations for 10 percent of all parking spaces are included as are design treatments to reduce the heat island effect.

Energy efficiency guidelines are included that require Project elements to be 15 percent more energy efficient than applicable California Energy Efficiency Standards. For energy-using equipment not governed by California Energy Efficiency Standards, best available energy efficient technologies are to be used. The energy efficiency guidelines address lighting, incorporation of solar collectors into facilities where feasible, establishing energy budgets for each building that will be no greater than 85 percent of applicable Title 24 standards, and other aspects of facility designs.

Water efficiency and conservation opportunities are identified to reduce or eliminate potable use in landscape, and for car and train washing.

Material conservation and resource efficiency guidelines are included to reduce the environmental impact from the use of construction materials by minimizing use of virgin materials, increasing use of recycled materials, using rapidly renewable materials, using local materials, using durable materials, and looking for opportunities to reuse materials.

Construction

During construction of the proposed Project, energy would be consumed in the form of electricity for powering the construction trailers (lights, electronic equipment, and heating and cooling) and exterior uses, such as lights, water conveyance for dust control, and other construction activities. Construction would also consume energy in the form of petroleum-based fuels associated with on and off-road construction equipment and vehicles, construction workers' travel to and from the proposed Project, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities). As discussed below, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas.

Electrical Demand

During construction, electricity would be consumed to power lighting, heating, and cooling in the construction trailers, outdoor lighting of the proposed Project, electric equipment, and supply and convey water for dust control. Electricity would be supplied by SCE and would be obtained from the existing electrical lines that connect to the proposed Project TPSSs. As shown in **Table 4.5-3: Total Electricity Use During Proposed Project Construction**, a total of approximately 172,177 kWh of electricity is estimated to be consumed during construction of the proposed Project. For comparison, the average annual electricity consumption for a U.S. residence is 10,972 kWh.[65] Although there is a temporary increase in electricity consumption during construction, the electrical consumption would be within the supply and infrastructure capabilities of SCE which estimates electricity consumption within its planning area will be approximately 115,000 GWh annually by 2022, which is the first year of construction.[66]

Table 4.5-3
Total Electricity Use During Proposed Project Construction

Fuel Type	Quantity
Electricity	
Water Conveyance	102,227 kWh
Construction Trailers	69,950 kWh
Total	**172,177 kWh**

Source: Refer to **Appendix 4.5.3** for detailed calculations.

The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, and would cease upon completion of construction. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent a small fraction of the proposed Project's operational electricity. Furthermore, the electricity used for off-road light construction equipment would reduce the amount of harmful construction-related air pollutant and GHG emissions because they would not rely on more traditional construction-related energy in the form of diesel fuel which generates emissions. As such, the proposed Project would not result in inefficient, or unnecessary consumption of electricity resources during construction.

Electrical energy demands during construction would be less than significant.

65 U.S. EIA, *Frequently Asked Questions*, "How much electricity does an American home use?" Accessed September 2020, https://www.eia.gov/tools/faqs/faq.php?id=97&t=3.

66 CEC, Demand Analysis Office, *California Energy Demand 2018-2030 Revised Forecast*, Accessed May 2020, https://efiling.energy.ca.gov/getdocument.aspx?tn=223244.

Natural Gas

Construction activities do not typically involve the consumption of natural gas, as construction equipment and staging rely heavily on electricity and transportation fuels. Accordingly, natural gas would likely not be needed to support construction activities; thus, there would be little to no demand generated by construction. As such, the proposed Project's would not result in inefficient, or unnecessary consumption of natural gas energy resources during construction.

Natural gas energy demands during construction would be less than significant.

Transportation Fuel

Construction of the proposed Project would result in the irretrievable commitment of construction materials (e.g., steel products, cement, glass). While construction would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment, the consumption of fossil fuels would occur on a temporary basis during the construction period.

As shown in **Table 4.5-4: Total Vehicle Fuel Use During Proposed Project Construction**, the Project would consume a total of 568,815,635 gallons of petroleum during the morning/evening shift construction scenario, and 523,690,244 gallons of petroleum during the morning/night shift construction scenario. The EIA forecasts a national oil supply of 20.42 mb per day in 2022, which is the first year of construction.[67] This equates to approximately 7,453 mb per year or 313,039 mg per year. Although construction would result in the consumption of petroleum-based fuels, it would be within the EIA supply forecast and would be temporary in nature.

Construction of the proposed Project would employ fuel-efficient equipment consistent with State and federal regulations, such as fuel efficiency regulations in accordance with the CARB Pavley Phase II standards,[68] the anti-idling regulation in accordance with section 2485 in Title 13 of the CCR,[69] and fuel requirements for stationary equipment in accordance with section 93115 (concerning Airborne Toxic

67 U.S. Energy Information Administration, *Annual Energy Outlook 2020: Table 11. Petroleum and Other Liquids Supply and Disposition*, Accessed July 2020, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=11-AEO2020&cases=ref2020&sourcekey=0.

68 California Air Resources Board, *Low-Emissions Vehicle Program,* Accessed July 30, 2020, https://ww2.arb.ca.gov/node/2930/about.

69 Title 13 CCR, Section 2485, accessed July 30, 2020, https://ww2.arb.ca.gov/sites/default/files/classic//msprog/truck-idling/13ccr2485_09022016.pdf.

Control Measures) in Title 17 of the CCR.[70] Use of construction equipment that is compliant with these regulations would result the use of more fuel-efficient engines and associated fuel savings.

Table 4.5-4
Total Vehicle Fuel Use During Proposed Project Construction

Source	Petroleum Consumption (Gallons)	
	Morning/Evening Shift	Morning/Night Shift
Off-Road Construction Equipment	3,630,270	4,102,730
On-Road Construction Equipment	564,920,032	518,983,511
Worker Vehicles	265,333	265,333
Delivery Vehicles[a]	0	338,670
Maximum Total	**568,815,635**	**523,690,244**

Source: Refer to **Appendix 4.5.4** for detailed calculations.
[a] Delivery of construction materials would occur during the night shift.

The proposed Project would divert mixed construction and demolition debris to City-certified construction and demolition waste processors using City-certified waste haulers, consistent with State targets of 75 percent waste diversion by 2020 and consistent with achieving the USGBC LEED Gold Certification[71] level, as discussed in design features (Green Building Features) in **Section 4.7**. In addition, select building materials or products for permanent installation would be selected from sources within southern California area. The proposed Project would divert mixed construction and demolition debris to City-certified construction and demolition waste processors using City-certified waste haulers, which would reduce truck trips to landfills, and increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption.[72]

Construction would utilize energy only for necessary on-site and off-site transportation-related activities, construction worker travel to and from the proposed Project, and to transport construction materials and demolition debris. Idling restrictions and the use of cleaner, energy-efficient equipment would result in less fuel combustion and energy consumption and thus minimize construction-related energy use. As such,

70 Airborne Toxic Control Measures, Title 17 CCR, Section 93115, Accessed July 30, 2020, https://ww2.arb.ca.gov/sites/default/files/classic//diesel/documents/finalreg2011.pdf?_ga=2.201342804.479047022.1596146954-1722362475.1583193018.

71 U.S. Green Building Council, LEED Rating System, Accessed July 30, 2020, https://www.usgbc.org/leed.

72 Energy savings result from the avoidance of needing to mine and process virgin materials and then transport those materials to the project. As shown on MS52 California Aggregates Map (https://www.conservation.ca.gov/cgs/Documents/MS_052_California_Aggregates_Report_201807.pdf) Aggregate production areas in the Los Angeles areas include Irwindale and areas further away in Upland and Temescal Canyon areas in Orange County. Irwindale is a lesser producer of virgin aggregate as most of the mines have been depleted to their permitted limits. According to LA County (https://dpw.lacounty.gov/epd/CD/cd_attachments/Recycling_Facilities.pdf) there are recycling facilities much closer that supply recycled aggregate and other construction materials to the region.

the proposed Project would not result in inefficient, or unnecessary consumption of vehicle fuels during construction.

Transportation fuel demands during construction would be less than significant.

Operation

Electrical Demand

Propulsion power (i.e., the power to run the train on a guideway) is provided via traction power substations (TPSS) located along the guideway alignment. Each TPSS includes equipment to transform the medium- to high-voltage power feed provided from the power companies to the required 750-volt direct current (VDC) needed to power the vehicles and other ancillary equipment. The proposed Project's operating components would utilize electrical energy for the operation of the related support features, such as the APM trains, stations, MSF and TPSSs via electricity from the two proposed TPSSs. For normal operations, the required load flow for power of the proposed Project would be divided between the two TPSSs (the MSF TPSS site and the TPSS at the City's Civic Center site on Prairie Avenue). This includes operation of all interior and exterior lighting features included for the proposed Project. Power requirements for each TPPS are provided in **Table 4.2-4: Proposed Project Normal Operation Load Flow**.

Table 4.2-4
Proposed Project Normal Operation Load Flow

TPSS Site	Peak Power (KW)	RMS Power (KW)	Average Power (KW)	RMS Current (A)
MSF TPSS	2,008	834	755	1,067
TPSS at the City's Civic Center site on Prairie Avenue	2,119	777	639	996

Source: Lea+Elliott, Inc. Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition -December 2020. Table 9-1.

Notes:

KW – kilowatt

RMS –The substation load calculation output provides both per second and root mean squared (RMS) KVA loads for each substation.

As shown, the proposed MSF TPSS is estimated to have a peak power load flow of 2008 kW, and the Transit Center TPSS is estimated to have a peak power load flow of 2119 kW for a total of 4,127 kW.73 The APM

73 Lea+Elliott, Inc. *Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition - December 2020* (See Appendix 3.0.1).

trains would operate for 18 hours per day which would generate a total electricity demand of 74,286 kWh per day or 27,114,390 kWh (27.1 GWh) per year.[74]

In the event the MSF TPSS is unable to operate, the TPSS at the City's Civic Center site on Prairie Avenue is estimated to have a peak power load of 4,152 kW which would generate a total electricity demand of 74,736 kWh per day or 27,278,640 kWh (27.3 GWh) per year. Similarly, in the event the TPSS at the City's Civic Center site on Prairie Avenue is unable to operate, the MSF TPSS is estimated to have a peak power load of 4,353 kW which would generate a total electricity demand of 78,354 kWh per day or 28,599,210 kWh (28.6 GWh) per year.

The electrical demand from the existing commercial, restaurant, and retail uses at the proposed Market Street/Florence Avenue Station site and proposed MSF site is 5,113,799 kWh per year. As shown in **Table 4.5-5: Annual Electricity Use from Proposed Project Operation**, the electricity demand for the proposed Project during normal operation would result in a net increase of 22,003,403 kWh (22.0 GWh) per year. In the event the MSF TPSS is unable to operate, the electricity demand would result in a net increase of 22,167,653 kWh (22.2 GWh) per year. In the event the TPSS at the City's Civic Center site on Prairie Avenue is unable to operate, the electricity demand would result in a net increase of 23,488,223 kWh (23.5 GWh) per year.

Table 4.5-5
Annual Electricity Use from Proposed Project Operation

Operation Scenario	Annual Electricity Usage (kWh/yr)		
	APM System[a]	Existing	Net Increase
Normal Operation	27,114,390	5,110,987	22,003,403
TPSS at the City's Civic Center site on Prairie Avenue Only	27,278,640	5,110,987	22,167,653
MSF TPSS Only	28,599,210	5,110,987	23,488,223

Notes: kWh/yr = kilowatt-hours per year.
*[a] Lea+Elliott, Inc. Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition - December 2020 (**See Appendix 3.0.1**).*

As further discussed in **Section 4.14: Utilities and Service Systems**, SCE completed a high-level Distribution Study to determine the amount of load that SCE could accommodate and required infrastructure upgrades in order to meet the proposed Project's recommended full redundancy design.[75]

74 Lea+Elliott, Inc. Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition - *December 2020* (See Appendix 3.0.1).

75 Lea+Elliott, Inc. *Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition* - December 2020.

SCE's analysis assumed the use of the existing single (nonredundant) 16 kva circuit currently available along Market Street as it may be the most likely used circuit for the proposed Project.

The results of SCE's analysis found that:[76]

- The maximum load that can be accommodated at the present time is 10 MVA.
- To accommodate the 10 MVA load with full redundancy, the following upgrades would be required:
  - 1,500 feet of new civil work/duct banks,
  - 1,860 feet of new 1000 JCN cable,
  - 1,700 feet of upgrading/re-cabling the existing SCE primary cable to 1000 JCN, and
  - Two new gas switches.

The aforementioned upgrades would be completed by SCE and would be subject to its procedures and requirements for construction and environmental clearance. Further, SCE noted that these values and upgrades are based on the current projected loads for 2026. SCE also noted that their distribution system is dynamic and is subject to change prior to the 2026 opening date of the proposed Project; however, as the design is finalized, SCE can effectively plan for this new load. The proposed Project will need to be reevaluated by SCE prior to coming online as the details are finalized.

As further discussed below, the proposed Project would be designed in a manner that is consistent with relevant energy requirements, such as Title 24 and CALGreen, which are designed to encourage development that results in the efficient use of energy resources.

As such, the proposed Project would not result in inefficient, or unnecessary consumption of electricity during operation and electricity demands during operation would be less than significant.

Natural Gas

No new gas connections to serve the proposed Project elements would be required except at the proposed MSF. Natural gas would be used at the MSF to serve the pressure wash system, and for space and water heating. **Table 4.5-6: Annual Natural Gas Use During Proposed Project Operation** shows the operational natural gas estimates for the operation of the MSF and stations, as well as the net total of natural gas after taking into account the existing uses to be demolished. As shown in **Table 4.5-6**, the MSF and stations would use approximately 2,131,800 kBTU (or 2.1 MMcf)[77] of natural gas per year. Moreover, the existing

76 Lea+Elliott, Inc. *Inglewood Transit Connector EIR Operating Systems Conceptual Planning EIR Project Definition* - December 2020.

77 The conversion of kBTU to cubic feet uses the factor of 1 cf to 1.037 kBTU.

uses currently utilize 5,412,676 kBTU of natural gas per year. Therefore, the proposed Project would result in a net decrease of 3,280,876 kBTU of natural gas per year.

Table 4.5-6
Annual Natural Gas Use During Proposed Project Operation

Source	Units	Quantity
Stations	kBTU/yr	501,600
MSF	kBTU/yr	1,630,200
Project Total	kBTU/yr	**2,131,800**
Existing Natural Gas	*kBTU/yr*	5,412,676
Net Natural Gas Total	**kBTU/yr**	**(3,280,876)**

Notes: kBtu/yr = thousand British Thermal Units per year.
*Source: See **Appendix 4.5.5** for MSF operational natural gas usage.*

Further, the proposed Project would be within the service capacity of SoCalGas which is anticipated to have an available capacity of approximately 3,775 MMcf of natural gas per day (or 1,377,875 million MMcf per year) in 2026, which is the opening year of the proposed Project[78] As discussed, the proposed Project would be designed in a manner that is consistent with building efficiency requirements including Title 24 and CALGreen. Increased building efficiency would help alleviate natural gas demand. Further, the proposed Project would incorporate a number of sustainability features as listed in **Table 3.0-5: Proposed Sustainability Guidelines**. These guidelines are intended to integrate the design of new and existing facilities and to create a passenger experience that reflects the City's history and architecture, while providing design guidance. As such, the proposed Project would not result in inefficient, or unnecessary consumption of natural gas during operation.

Natural gas demands during operation would be less than significant.

Transportation Fuel

During operation, vehicle use within the proposed Project vicinity would result in the consumption of petroleum-based fuels related to vehicular travel along roadways.

The proposed Project spans approximately 1.6 miles and would be located near existing grocery store, restaurant, retail, and commercial land uses which generate vehicle trips on local roadways within the proposed Project. The proposed Project would provide direct connections between regional transit provided by Metro, specifically at the Crenshaw/LAX Line, and other transit providers as well as the City's

78 California Gas and Electric Utilities, *2018 California Gas Report,* Accessed May 2020, https://www.sdge.com/sites/default/files/regulatory/2018%20California%20Gas%20Report.pdf.

major activity centers, such as the Forum, the LASED and HPSP. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce per-capita VMT. **Table 4.5-7: Annual VMT With and Without Proposed Project** presents the annual VMTs for the Adjusted Baseline, Future (2026), and Future (2045) scenarios.

As shown in **Table 4.5-7**, implementation of the proposed Project would reduce annual VMTs under all scenarios. Specifically, under the Adjusted Baseline scenario, the proposed Project would reduce annual VMTs from 1,007,356,937 to 1,000,735,086, a decrease of 6,621,851. Under the Future (2026) Non-Event scenario, the proposed Project would reduce annual VMTs from 1,245,731,160 to 1,235,569,208, a decrease of 10,161,952. Under the Future (2026). All Event scenario, the proposed Project would reduce annual VMTs from 1,346,432,106 to 1,316,518,609, a decrease of 29,913,497. Under the Future (2045) Non-Event scenario, the proposed Project would reduce annual VMTs from 1,369,204,193 to 1,357,349,494, a decrease of 11,854,699. Under the Future (2045). All Event scenario, the proposed Project would reduce annual VMTs from 1,469,905,139 to 1,433,075,931, a decrease of 36,829,208.

Table 4.5-7
Annual VMT With and Without Proposed Project

Scenario	Annual VMT		
	Without ITC	With ITC	Reduction
Adjusted Baseline	1,007,356,937	1,000,735,086	6,621,851
Future (2026) Non-Event	1,245,731,160	1,235,569,208	10,161,952
Future (2026) All Events	1,346,432,106	1,316,518,609	29,913,497
Future (2045) Non-Event	1,369,204,193	1,357,349,494	11,854,699
Future (2045) All Events	1,469,905,139	1,433,075,931	36,829,208

*See **Section 4.12:Transportion** to this Draft EIR for further discussion.*

Petroleum usage from vehicle travel was calculated based on the projected annual VMTs provided previously. **Table 4.5-8: Annual Vehicle Fuel Use With and Without Proposed Project** below presents the annual petroleum consumption for the Adjusted Baseline, Future (2026), and Future (2045) scenarios. As shown, implementation of the proposed Project would reduce annual petroleum-based fuel under all scenarios. Specifically, under the Adjusted Baseline scenario, the proposed Project would reduce annual fuel consumption from 49,373,645 gallons to 49,049,088 gallons, a decrease of 324,557 gallons. Under the Future (2026) Non-Event scenario, the proposed Project would reduce annual fuel consumption from 46,722,216 gallons to 46,341,084 gallons, a decrease of 381,133 gallons. Under the Future (2026) All Event scenario, the proposed Project would reduce annual fuel consumption from 50,499,092 gallons to 49,377,161 gallons, a decrease of 1,121,931. Under the Future (2045) Non-Event scenario, the proposed

Project would reduce annual fuel consumption from 41,714,897 gallons to 41,353,725 gallons, a decrease of 361,172 gallons. Under the Future (2045) All Event scenario, the proposed Project would reduce annual fuel consumption from 44,782,905 gallons to 43,660,847 gallons, a decrease of 1,122,058 gallons.

Table 4.5-8
Annual Vehicle Fuel Use With and Without Proposed Project

Scenario	Annual Fuel Consumption (gal)		
	Without ITC	With ITC	Reduction
Adjusted Baseline	49,373,645	49,049,088	324,557
Future (2026) Non-Event	46,722,216	46,341,084	381,133
Future (2026) All Events	50,499,092	49,377,161	1,121,931
Future (2045) Non-Event	41,714,897	41,353,725	361,172
Future (2045) All Events	44,782,905	43,660,847	1,122,058

*Source: See **Appendix 4.5.6** for fuel calculations.*

A majority of the vehicles would consist of light-duty automobiles and light-duty trucks, which are subject to fuel efficiency standards. These vehicles would be required to comply with CAFE fuel economy standards,[79] which would result in more efficient use of transportation fuels, specifically a lower consumption. Vehicles used for project-related vehicle trips would also comply as applicable with Pavley and Low Carbon Fuel Standards[80] which are designed to reduce vehicle GHG emissions, but would also result in fuel savings, in addition to compliance with CAFE standards. The proposed Project would support Statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles for the reasons discussed below. As discussed in detail in **Section 4.9: Land Use and Planning**, the proposed Project design and characteristics would be consistent with and would not conflict with the goals of both the SCAG 2016 RTP/SCS[81] and 2020-2045 RTP/SCS.[82] SCAG's 2016 RTP/SCS and 2020-2045 RTP/SCS provide a framework for member agencies to fund and implement regional transportation infrastructure improvements that benefit the region as a whole, including transit projects such as the one analyzed herein.

Additionally, the proposed Project would include up to two stationary standby generators with an estimated total capacity rated at approximately 4,000 kilowatts (kW) to provide emergency power

79 NHTSA, *Corporate Average Fuel Economy,* Accessed July 30, 2020, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.
80 California Air Resources Board, *Low-Emissions Vehicle Program*, Accessed July 30, 2020, https://ww2.arb.ca.gov/node/2930/about.
81 Southern California Association of Governments, *Final 2016 RTP/SCS,* Accessed July 30, 2020, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.
82 Southern California Association of Governments, *Connect SoCal – 2020 – 2045 RTP/SCS,* Accessed July 30, 2020, https://www.connectsocal.org/Pages/What-Is-Connect-SoCal.aspx.

primarily for lighting and other emergency building systems. Emergency generators would utilize diesel fuel to operate during an emergency and for testing and maintenance. The generators would be required to comply with applicable federal emissions standards and SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) which mandate emission limits and operating hour constraints. Specifically, each standby generator would operate for 2 hours per day during 25 days per year for a total of 50 hours per year. For emergency operation both generators would operate up to 2 hours each and could occur simultaneously. SCAQMD requires that all internal combustion engines (ICE) greater than 50 brake horsepower (bhp) and gas turbines greater than 2,975,000 Btu per hour obtain a permit to construct prior to installation of the engines. The estimated annual fuel usage assuming each generator operates of 50 hours per year (2 hours per day) is 27,440 gallons of diesel fuel.[83]

The Project would not result in inefficient, or unnecessary consumption of vehicle fuels during operation. Accordingly, vehicle fuel demands during operation would be less than significant.

Summary

Operation of the proposed Project would comply with all applicable building codes, including the 2019 Title 24 building energy efficiency standards,[84] CAFE fuel economy standards,[85] consistency with the SCAG 2016-40 RTP/SCS,[86] compliance with the County's Low Impact Development (LID) Development Standards Manual,[87] compliance with the City's Low Impact Development Requirements for New Development and Redevelopment, the City's Green Street Policy,[88] the City's Water Conservation and Water Supply Shortage Program,[89] the Sustainability Guidelines included in the ITC Design Guidelines as described above, as well as mitigation measures included in this Draft EIR, which would ensure that natural resources are used efficiently and conserved to the maximum extent possible.

The City has developed a set of broad sustainability strategies included as part of the Design Guidelines to be incorporated into the design, construction, and operations of each proposed Project component. These

83 Vender Specifications for Standby Generator, Accessed August 25, 2020 at: https://www.cat.com/en_US/products/new/power-systems/electric-power.html.
84 *California Green Building Standards Code (*CCR, Title 24, Part 11 - CALGreen).
85 NHTSA, *Corporate Average Fuel Economy*, Accessed July 30, 2020, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.
86 Southern California Association of Governments, *Final 2016 RTP/SCS, Accessed July 30, 2020,* http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.
87 County of Los Angeles Department of Public Works, *Low Impact Development,* Accessed July 30, 2020, https://dpw.lacounty.gov/ldd/lib/fp/Hydrology/Low%20Impact%20Development%20Standards%20Manual.pdf.
88 *Inglewood Municipal Code,* Chapter 10 Section 208, Accessed July 2020, http://www.qcode.us/codes/inglewood/view.php?topic=10-16-10_208&frames=off.
89 City of Inglewood, Ordinance No. 15-02, Accessed July 30, 2020, https://www.cityofinglewood.org/DocumentCenter/View/1011/Ordinance-Number-15-02-PDF.

guidelines align with Inglewood's commitment to sustainability City-wide, as outlined in the City's Energy and Climate Action Plan and Energy Efficiency Climate Action Plan. These sustainability guidelines serve as a mechanism to promote the City's commitment to reduce its environmental footprint and promote energy efficient design requirements, water conservation and water quality improvement projects, natural resource protection efforts, waste reduction and recycling, and numerous air quality emissions reduction policies and programs.

For construction impacts the City would include in bid documents for the proposed Project language specifying that the contractors shall use equipment on the proposed Project that meets the most stringent emission requirements as specified in the City's standard control measures.

For operational impacts, the proposed Project would comply with the requirements of California Green Building Standards Code (CALGreen) and be consistent with the City of Inglewood Energy Efficiency Climate Action Plan involving policies and programs related to sustainability, energy efficiency, and reduction in GHG emissions. The City has committed to taking an active role in promoting energy conservation and environmentally-friendly initiatives to improve the environment and realize the cobenefits, which include energy independence, cost savings for energy not used, water saved, improved air quality, and public health benefits from improved air quality.

The City has an ongoing commitment to increasing energy efficiency and implementing energy conservation measures to reduce wasteful, inefficient, and unnecessary consumption. The proposed Project would incorporate a number of sustainability features as listed in **Table 3.0-5: Proposed Sustainability Guidelines**. These guidelines are intended to integrate the design of new and existing facilities and to create a passenger experience that reflects the City's history and architecture, while providing design guidance for new construction or modernization of the proposed Project. The City has committed to implementing, if feasible, various sustainability measures for different proposed Project elements that meet or exceed CALGreen requirements, including energy and water conservation measures, for each of the follow proposed Project components: the guideway, stations, and the MSF. The sustainability strategies relate to planning and design; energy efficiency and renewable energy; water efficiency and conservation; materials conservation and resource efficiency; and environmental quality.

Further, it is expected that over time new technologies or systems will emerge, or will become more cost-effective or user-friendly, which will further reduce the reliance upon nonrenewable natural resources. For example, future implementation of the Clean Fuel Standard and the Renewable Portfolio Standard are expected to decrease the use of nonrenewable fossil fuels.

As stated in **Section 3.0**, the goals of the proposed Project include building new efficient transportation facilities that conserve energy, water, and other resources; and reducing traffic congestion and VMT. The components of the proposed Project would be required to meet the energy efficiency and conservation requirements of the California Green Building Standards Code[90] and the City Energy Efficiency Climate Action Plan.[91] Specifically, the proposed Project would be incorporate the sustainability features included in the ITC Design Guidelines as described above.

Operation of the proposed Project would minimize the consumption of transportation fuels. Therefore, as proposed operation of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of electricity, natural gas, and transportation fuels, the proposed Project would not result in unjustified consumption of natural resources and impacts would be less than significant.

Mitigation Measures

Construction

No mitigation is required.

Operation

No mitigation is required.

Level of Significance after Mitigation

Construction

Impacts related to energy use from implementation of the proposed Project and potential future related development would be less than significant.

Operation

Impacts related to energy use from implementation of the proposed Project and potential future related development would be less than significant.

Impact E-2: Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

The Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the CALGreen Code and California's Building Energy Efficiency

90 California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)

91 City of Inglewood, *Energy Efficiency Climate Action Plan*, December 2015, accessed June 2020, http://www.southbaycities.org/sites/default/files/EECAP_Inglewood_Final_20151218.pdf.

Standards, which have been incorporated into the County Green Building Code. Based on the below, the Project would be consistent with adopted energy conservation plans and impacts would be less than significant.

The Inglewood Energy and Climate Action Plan (ECAP)

The ECAP[92] includes a business-as-usual (BAU) forecast that estimates future emissions in 2020 and 2035 from six sectors: Transportation, Residential Energy, Commercial/Municipal Energy, Industrial Energy, Solid Waste, and Water. The BAU forecast assumes a future under regulatory conditions as they existed in 2010, and it does not include the effects of updates to Title 24,[93] the Renewables Portfolio Standard,[94] and the Pavley Clean Car Standards[95] on future GHG emissions. Under the BAU forecast, total GHG emissions in Inglewood are expected to increase approximately 14 percent from 2010 (594,273 MTCO2e) to 2035 (678,283 MTCO2e). On a per service population basis, the increase is shown to be 4.5 percent, from 4.22 MTCO2e/SP in 2010 to 4.41 MTCO2e/SP in 2035. The GHG emissions reductions realized by State and local measures would be a direct result of energy efficiency upgrades aimed at increasing building energy performance, promoting renewable energy, and increasing vehicle fuel economy.

ECAP[96] implementation is expected to reduce emissions by 18.8 percent below 2005 levels by 2020, enabling the City to meet its 2005 target. However, the City would, need to reduce emissions by an additional 111,702 MT CO2e per year by 2035 to meet its 2035 target. The ECAP identifies a number of strategies aimed at reducing emissions through increased energy efficiency, renewable energy generation, improved transit options, and reduced consumption and waste. The ECAP includes energy reductions from the following implementing strategies and actions:

Strategy 4: Improve Transportation Options and Manage Transportation Demand

- Make roadways more efficient
- Improve transit
- Improve bicycle facilities
- Make parking more efficient

92 City of Inglewood, *Energy Efficiency Climate Action Plan,* December 2015, accessed June 2020, http://www.southbaycities.org/sites/default/files/EECAP_Inglewood_Final_20151218.pdf.
93 California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen).
94 *SB 1078, Renewable Energy: California Renewables Portfolio Standard Program.*
95 AB 1493, *Clean Car Standards – Pavley, California Air Resources Board, Low-Emissions Vehicle Greenhouse Gas Program,* Accessed July 30, 2020, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/lev-program/low-emission-vehicle-greenhouse-gas.
96 *City of Inglewood, Energy Efficiency Climate Action Plan,* December 2015, accessed June 2020, http://www.southbaycities.org/sites/default/files/EECAP_Inglewood_Final_20151218.pdf.

- Reduce commute trips
- Encourage land use intensification and diversity

ECAP implementation is expected to reduce emissions by 18.8 percent below 2005 levels by 2020, enabling the City to meet its 2005 target. However, the City would, need to reduce emissions by an additional 111,702 MT CO2e per year by 2035 to meet its 2035 target. The ECAP identifies a number of strategies aimed at reducing emissions through increased energy efficiency, renewable energy generation, improved transit options, and reduced consumption and waste.

The proposed Project would provide direct connections between regional transit provided by Metro, specifically at the Crenshaw/LAX line, and other transit providers as well as the City's major activity centers, such as the Forum, the LASED, HPSP and the IBEC. Implementation of the proposed Project would increase transit mode split, reduce vehicle trips, and reduce per-capita VMT.

The proposed Project would be consistent with the City ECAP.

Impacts would be less than significant.

CALGreen Code and Title 24

The proposed Project would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The proposed Project would incorporate the sustainability features as contained in the ITC Design Guidelines as described above. For example, all components of the Project will be 15 percent more energy efficient than applicable California Energy Efficiency Standards. For energy-using equipment not governed by California Energy Efficiency Standards, best available energy efficient technologies will be used. These energy efficiency guidelines address lighting, incorporation of solar collectors into facilities where feasible, establishing energy budgets for each building that will be no greater than 85 percent of applicable Title 24 standards. Newly installed outdoor lighting power would be no greater than 90 percent of the Title 24, Part 6[97] calculated value of allowed outdoor lighting power. All building projects that include indoor lighting or mechanical systems, but not both, will have an energy budget that is not greater than 90 percent of the Title 24, Part 6 Energy Budget.[98]

Water demand indoors and outdoors would be reduced through numerous measures that meet or exceed CalGreen requirements.[99] Recycled water would be used for landscape irrigation, toilet flushing, or car or

97 *California Green Building Standards Code* (CCR, Title 24, Part 6 - CALGreen)
98 *California Green Building Standards Code* (CCR, Title 24, Part 6, Section 100.1(b) - CALGreen)
99 *California Green Building Standards Code* (CCR, Title 24, Part 11 - CALGreen)

train washing, water would be filtered and reused as wash and rinse water for train cars in the MSF. Once initial plants are established, xeriscape landscape would be implemented to utilize no-water irrigation, and drought-tolerant plants would be watered via drip irrigation. Low flow faucets and low flow flush fixtures would be implemented throughout the proposed Project design, and the best available water efficiency technologies would be used for cooling towers. Drainage systems designs would manage and capture any stormwater runoff to the maximum extent feasible through, in order of priority, infiltration, evapotranspiration, capture and use, and treatment with a high removal efficiency biofiltration/ biotreatment system.

As such, the proposed Project would comply with CALGreen and Title 24 requirements[100] to reduce energy consumption by implementing energy efficient building designs, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

SCAG 2016–2040 RTP/SCS & 2020-2045 RTP/SCS

The proposed Project would be consistent with the 2016-2040 RTP/SCS[101] and the recently adopted 2020-2045 RTP/SCS.[102] The SCAG RTP/SCS is designed to support development of compact communities in existing urban areas with more mixed-use and infill development, and reuse developed land that is also accessible to transit and/or served by high quality transit. The 2016-2040 RTP/SCS describes how the region can attain the GHG emission-reduction targets set by CARB by reducing VMT to achieve an 8 percent reduction in passenger vehicle emissions by 2020, 19 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis. The 2020-2045 RTP/SCS builds on the foundation of the 2016-2040 RTP/SCS by adapting its goals to a changing region, mainly focusing on leveraging new transportation technologies for more efficient travel, improving mobility and accessibility, and increasing the movement of people and diversification of choice within the transportation system.

Overall, the Project would be consistent with the goals and policies of the SCAG 2016 RTP/SCS because it is an infill site accessible to transit, and it supports reductions in VMT to and from the proposed Project. Although the 2016-2040 RTP/SCS and upcoming 2020-2045 RTP/SCS are not technically energy efficiency plans, consistency with the both the 2016 RPS/SCS and 2020 RTP/SCS has energy implications, including the reduction of VMT from the plan which reduces GHG emissions and reduces fossil fuel consumption from travel to and from the implementation of the proposed Project.

100 *California Green Building Standards Code* (CCR, Title 24, Part 11 - CALGreen)

101 Southern California Association of Governments, *Final 2016 RTP/SCS*, Accessed July 30, 2020, http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

102 Southern California Association of Governments, *Connect SoCal – 2020 – 2045 RTP/SCS*, Accessed July 30, 2020, https://www.connectsocal.org/Pages/What-Is-Connect-SoCal.aspx.

Impacts would be less than significant.

Summary

The proposed Project would incorporate a number of sustainability features as listed in **Table 3.0-5: Proposed Sustainability Guidelines**. These guidelines are intended to integrate the design of new and existing facilities and to create a passenger experience that reflects the City's history and architecture, while providing design guidance for new construction or modernization of the proposed Project. The City has committed to implementing various sustainability measures for different proposed Project elements that meet or exceed CALGreen requirements, including energy and water conservation measures, for each of the follow proposed Project components: the guideway, stations, and the MSF. As such, it would be consistent with applicable plans, policies and regulations adopted for the purpose of promoting renewable energy and overall energy efficiency.
Impacts would be less than significant.

Mitigation Measures

Construction

No mitigation is required.

Operation

No mitigation is required.

Level of Significance after Mitigation

Construction

Implementation of the proposed Project would be consistent with the applicable plans; impacts would be less than significant.

Operation

Implementation of the proposed Project would be consistent with the applicable plans; impacts would be less than significant.

4.5.8 CUMULATIVE IMPACTS

Implementation of the proposed Project, including the related projects identified in **Section 4.0**, *4.0-6: Cumulative Assumptions* would further increase demands for energy and may require the construction or relocation of related supply facilities. Each project will require site specific assessment to determine any impacts to existing energy or conservation.

Electricity

As discussed previously, electricity within the City is supplied by SCE. The geographic scope for cumulative electricity impacts is SCE's electricity service area. There are approximately 304 related projects that would be within the same service area as the proposed Project. Development of the proposed Project and related projects could cumulatively increase demands on the existing electricity supply. However, each project will require a site-specific assessment to determine any impacts to existing and forecasted electricity supply. Specifically, all related projects would be required to assess construction and operational electricity usage and coordinate with SCE prior to project approval. Further, like the proposed Project, other related projects would be required to incorporate energy conservation features in order to comply with applicable mandatory regulations including CALGreen and State energy standards in Title 24, and incorporate mitigation measures, as necessary. Therefore, cumulative impacts related to electrical infrastructure would be less than significant.

Natural Gas

As discussed previously, SoCalGas is the natural gas purveyor within the City. The geographic scope for cumulative natural gas impacts is SoCalGas' service area. There are approximately 394 related projects that would be within the same service area as the proposed Project. Development of the proposed Project and related projects could cumulatively increase demands on the existing natural gas supply. However, each project will require a site-specific assessment to determine any impacts to existing and forecasted natural gas supply. Specifically, all related projects would be required to assess construction and operational natural gas usage and coordinate with SoCalGas prior to project approval. Further, like the proposed Project, other related projects would be required to incorporate energy conservation features in order to comply with applicable mandatory regulations including CALGreen and State energy standards in Title 24, and incorporate mitigation measures, as necessary. Therefore, cumulative impacts related to natural gas infrastructure would be less than significant.

Transportation Fuel

The geographic scope for cumulative transportation fuel impacts is the SCAG region. Buildout of the proposed Project and other transit and transit-oriented-development projects in the SCAG region would be expected to decrease overall VMT, as a result of the use of the APM trains by people, rather than using vehicles for travel to the area. The effect on transportation fuel demand by other cumulative projects would be reduced by future improvements to vehicle fuel economy pursuant to Federal and State regulations. By 2025, vehicles are required to achieve 54.5 mpg (based on USEPA measurements), which is a 54 percent increase from the 35.5 mpg standard in the 2012–2016 standards. Cumulative development projects would need to demonstrate consistency with these goals and incorporate any mitigation

measures required under CEQA, which would also ensure cumulative development projects contribute to transportation energy efficiency. Therefore, cumulative impacts related to transportation fuels would be less than significant.

4.5.9 CONSISTENCY WITH CITY GENERAL PLAN

The City General Plan does not contain any policies, regulations, or directives that specifically address energy resources. However, the following circulation goals from the Land Use Element of the City General Plan are relevant to transportation-related energy demand and conservation.[103]

Circulation Goal: Promote and support adequate public transportation within the City and the region.

Circulation Goal: Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

The proposed Project would promote and support adequate public transportation within the City and the region. The proposed Project is a public transit project by design, connecting future riders to the Metro Crenshaw/LAX line and solving the problem of the last mile connection to various activity centers throughout the City. The proposed Project would decrease overall VMT as a result of the ridership in lieu of automobile use to and from the City activity centers. Decrease in VMT would result in more efficient energy use and a reduction in vehicle fuel usage and GHG emissions.

The proposed Project would develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped. For example, all station mezzanine levels would provide connectivity to passenger walkways for traveling over existing roadways. The passenger walkways would be designed to improve both pedestrian access and comfort between the stations and the City in addition to providing multimodal access to adjacent bus facilities, pick-up and drop-off areas, and other adjacent resources. The proposed Project would also upgrade existing sidewalks to ensure consistent ADA appliance along the transit corridor. As such, the proposed Project would be consistent with the City General Plan goals relevant to transportation-related energy demand and conservation as discussed under **Impact E-2**.

103 City of Inglewood, Department of Community Development and Housing, 1980. *Land Use Element of the Inglewood General Plan. January 1980.* Amended September 14, 2016.