3.4. ENERGY RESOURCES

This section provides an overview of energy resources and evaluates the construction and operational impacts associated with the Proposed Project.

3.4.1. REGULATORY FRAMEWORK

3.4.1.1. Federal

Energy Policy and Conservation Act of 1975

The Energy Policy and Conservation Act was enacted for the purpose of serving the nation's energy demands and promoting conservation methods when feasibly obtainable. This Act mandated vehicle economy standards, extended oil price controls to 1979, and directed the creation of a strategic petroleum reserve.

Intermodal Surface Transportation Efficiency Act of 1991 and the Congestion Mitigation and Air Quality Improvement Program

The Intermodal Surface Transportation Efficiency Act was the first federal legislation regarding transportation planning and policy. This Act presented an intermodal approach to transportation funding with collaborative planning requirements, giving additional powers to State and local transportation decision makers and metropolitan planning organizations. This Act provided funds for non-motorized commuter routes, defined a number of High Priority Corridors to be part of the National Highway System, and called for the designation of up to five high-speed rail corridors.

The Congestion Mitigation and Air Quality Improvement Program was created under the Intermodal Surface Transportation Efficiency Act and reauthorized in 1998 and again in 2005. The purpose of the Congestion Mitigation and Air Quality Improvement Program is to fund transportation projects or programs and related efforts that contribute to air quality improvements and provide congestion relief.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was enacted in 1998 as the successor legislation to the Intermodal Surface Transportation Efficiency Act and builds on its established initiatives. This Act reauthorized the Congestion Mitigation and Air Quality Improvement Program and authorized federal highway, highway safety, transit and other surface transportation programs over the next six years. It combines the continuation and improvement of current programs with new initiatives to meet the challenges of improving traffic safety, protecting and enhancing communities and the natural environment as transportation is provided and advancing economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

Energy Policy Act of 1992

The Energy Policy Act reduces dependence on imported petroleum and improves air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy and energy efficiency. This Act encourages the use of alternative fuels through both regulatory and voluntary activities and through the approaches carried out by the U.S. Department of Energy. It requires federal, State, and alternative fuel provider fleets to acquire alternative fuel vehicles. The Department of Energy's Clean Cities Initiative was established in response to the Energy Policy Act to implement voluntary alternative fuel vehicle deployment activities.

Energy Policy Act of 2005

The Energy Policy Act necessitates the development of grant programs, demonstration and testing initiatives, and tax incentives that promote alternative fuels and advanced vehicles production and use. This Act also amends existing regulations, including fuel economy testing procedures and Energy Policy Act requirements for federal, State, and alternative fuel provider fleets.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act consists of provisions designed to increase energy efficiency and the availability of renewable energy. Key provisions of this Act include:

- The Corporate Average Fuel Economy (CAFE), which sets a target of 54.5 miles per gallon for the combined fleet of cars and light trucks by model year 2025;
- The Renewable Fuels Standard, which sets a modified standard that starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons by 2022;
- The Energy Efficiency Equipment Standards, which includes a variety of new standards for lighting and for residential and commercial appliance equipment; and
- The repeal of oil and gas tax incentives, which includes repeal of two tax subsidies in order to offset the estimated cost to implement the CAFE provision.

3.4.1.2. State

California Energy Commission (CEC)

The CEC is the State's primary energy policy and planning agency. Created by the 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 megawatts 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 the State’s response to energy emergencies.

Senate Bill 1389 (SB 1389), Chapter 568, Statutes of 2002

SB 1389 requires the CEC to prepare a biennial integrated energy policy report assessing major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors. The report is also intended to provide policy recommendations to conserve resources, protect the environment, and ensure reliable, secure, and diverse energy supplies. The 2015 Integrated Energy Policy Report, the most recent report required under SB 1389, was released to the public in February 2016.

Assembly Bill 32 (AB 32)

AB 32 requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide greenhouse gas (GHG) emissions and directs the CARB to set a GHG emission limit—based on 1990 levels—to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The AB 32 Scoping Plan and related updates set forth the framework for facilitating the State's goal of reducing GHG emissions to 1990 levels by 2020. The first Scoping Plan has since been updated to include strategies to meet a 2030 GHG reduction goal of 40 percent below 1990 levels (the goal set out in Executive Order (EO) B-30-15. The AB 32 Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions, including expanding energy efficiency programs, increasing electricity production from renewable resources (at least 33 percent of the statewide electricity mix), increasing automobile efficiency, implementing the Low-Carbon Fuel Standard, and developing a cap-and-trade program. Multiple AB 32 Scoping Plan measures address GHG emissions from transportation fuels and energy.

Senate Bill 32 (SB 32)

In 2016, the California Legislature passed SB 32, which expands upon AB 32, and codifies a 2030 GHG emission reduction target of 40 percent below 1990 levels. The passage of SB 32 was contingent on the passing of Assembly Bill 197 (AB 197), which increases legislative oversight of CARB and provides additional direction for developing the Scoping Plan.

Assembly Bill 2076 (AB 2076) Reducing Dependence on Petroleum

The CEC and CARB are directed by AB 2076 (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15 percent less than the 2003 demand by 2020.

Executive Order S-3-05 (EO S-3-05)

EO S-3-05 established State GHG emission targets of 1990 levels by 2020 (the same as AB 32, enacted later and discussed above) and 80 percent below 1990 levels by 2050. It calls for the Secretary of the Cal/EPA to be responsible for the coordination of State agencies and progress reporting. In response to the EO, the Secretary of the Cal/EPA created the Climate Action Team (CAT), a coordinating council.

Executive Order B-30-15 (EO B-30-15)

EO B-30-15 established a mid-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and required CARB to update its current AB 32 Scoping Plan to identify the measures to meet the 2030 target. The EO supports EO S-3-05, described above, but is currently binding only on State agencies.

California Environmental Quality Act (CEQA) and the CEQA Guidelines

PRC Section 21100 (b)(3) provides that an EIR shall include a detailed statement setting forth mitigation measures proposed to minimize a project's significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines states that "[p]otentially significant energy implications shall be considered in an EIR to the extent relevant and applicable to the proposed project."

California Green Building Standards Code (CALGreen)

In January 2010, the California Building Standards Commission adopted CALGreen Part 11 of Title 24, CCR. The CALGreen was updated in 2015 to require additional energy savings. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure.

3.4.1.3. Regional

Southern California Association of Governments (SCAG)

With a population of more than 18 million as of 2010, the SCAG region is the second-most populated metropolitan area in the United States. Growth in population is expected to result in greater demands on the region's transportation system. State and federal mandates require SCAG to prepare a regional transportation plan (RTP) every four years. The 2016–2040 RTP/SCS provides a long-range vision for regional transportation goals and policies and predicts transportation challenges and the region's future transportation strategy. The RTP/SCS establishes the following goals relevant to the Proposed Project:

- Preserve and ensure a sustainable transportation system; and
- Actively encourage and create incentives for energy efficiency, where possible.

SCAG adopted mitigation measures associated with the RTP/SCS to reduce regional energy use and consumption. These measures include, but are not limited to, working with local jurisdictions and energy providers, through its Energy and Environment Committee, and administration of the Clean Cities program, Sustainability Planning grants program, and other SCAG energy-related planning activities, to encourage energy efficient building development. Additional measures include, pursuing partnerships with Southern California Edison, municipal utilities, and the California Public Utilities Commission (CPUC) to promote energy

efficient development in the SCAG region through coordinated planning, data, and information-sharing activities.

3.4.1.4. Local

Los Angeles County Metropolitan Transportation Authority (Metro)

Metro's core mission is to ensure the continuous improvement of an efficient and effective transportation system for Los Angeles County. In order to meet its mission, it has developed multiple sustainability initiatives, which promote improvement across the spectrum from ridership, energy savings, and sustainable construction practices. In 2011, Metro published its Energy Conservation and Management Plan (ECMP) to serve as a strategic blueprint for proactively guiding energy use in a sustainable, cost-effective, and efficient manner. The ECMP complements Metro's 2007 Energy and Sustainability Policy, focusing on electricity for rail vehicle propulsion, electricity for rail and bus facility purposes, natural gas for rail and bus facility purposes, and the application of renewable energy. The ECMP addresses current and projected energy needs based on 2010 utility data and existing agency plans to meet increasing ridership through system expansion and new facility construction incorporating Measure R initiatives.

The ECMP examines both supply and demand aspects of energy consumption and analyzes energy use profiles and the various procurement options in terms of rate structures and supply contracts available to the agency. It also identifies opportunities to reduce energy consumption and realize cost savings through the implementation of low-cost operational initiatives and cost-effective capital retrofits. The ECMP includes an evaluation of an optimal organizational structure for its implementation and provides recommended strategies for achieving the objectives set forth. The ECMP strategies follow a Plan-Do-Check-Act process by establishing the Energy Management Action Plan (EMAP), implementing the EMAP, conducting annual reviews, and adjusting or modifying the EMAP based on gathered feedback and documented performance. In the short term, the ECMP calls for expansion of utility data collection and sub-metering of buildings and propulsion injection points to enhance the accuracy of system analyses and identify primary opportunities for improvements.

Following publication of the ECMP, Metro began preparing annual Energy and Resource Reports to provide evaluations on the effectiveness of ECMP strategies. The most recent iteration is the 2017 Energy and Resource Report, which analyzes the sustainability and environmental performance of Metro operational activities during the 2016 calendar year. Relative to 2015, Metro operations in 2016 reduced GHG emissions by 1.2 percent (a decrease of over 4,000 metric tons of carbon dioxide equivalent, and reduced fuel use by 2.7 percent (1 million fewer gallons used). These achievements are testaments to the effectiveness of the ECMP. Key accomplishments highlighted in the 2017 Energy and Resource Report include the expansion of electric vehicle charging station provision, continuance of the photovoltaic technical and preventative maintenance training program for solar installations, and research into fleet conversion to electric. Metro has committed to achieving 33 percent renewable energy use by 2020, striving for new buildings and facilities to meet Leadership in Energy and Environmental Design Certified Gold standards, and installing sub-meters for electricity at all of Metro's facilities as initiatives for further enhancing energy performance of its system.

Metro has adopted a Green Construction Policy committing to less-polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions on all Metro construction projects performed on Metro properties and rights-of-way. Best practices include Tier 4 emission standards for off-road diesel-powered construction equipment with greater than 50 horsepower and restricting idling to a maximum of five minutes.

Metro also requires all projects to submit a Sustainability Plan, which provides the project's goals to, at a minimum, efficiently implement the mandatory sustainability measures as listed in the Sustainability Measures Checklist from the Current Edition of the CCR, CALGreen, and record benefits associated with each measure. Categories which the project must address include: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

City of Los Angeles

The City of Los Angeles has implemented numerous regulations, plans, programs, and policies aimed at reducing citywide energy demands and enhancing energy efficiency. The energy conservation efforts are interrelated with strategies to improve sustainability and regional air quality, as well as transportation and traffic congestion. Projects under jurisdiction of the City of Los Angeles are subject to the requirements of the Los Angeles Green Building Code, and implementation of projects is considered in the context of the Sustainable City pLAn which serves as the City's guide for addressing the challenges presented by climate change. Collectively, the City of Los Angeles strives to reduce energy demand and enhance energy efficiency by promoting green buildings, encouraging transit-oriented development, and by approving projects that will reduce VMT and provide alternative modes of transportation.

Los Angeles Department of Water and Power (LADWP)

LADWP annually prepares a Power Integrated Resource Plan (IRP) to provide a 20-year framework to ensure that current and future energy needs of the City of Los Angeles are met. The IRP is LADWP's long-range plan for securing adequate generation resources in order to meet its obligation to provide adequate and low-cost electric service to Los Angeles. The IRP lays out a balanced set of short-term actions and long-term goals for increasing renewable and energy efficiency resources, reducing GHG emissions, and upgrading aging infrastructure. Assessing and managing the City's existing and future energy demand is an important component of the IRP.

3.4.2. EXISTING SETTING

State Energy Resources and Use

The following information was obtained from the U.S. Energy Information Administration's California state profile unless noted otherwise.[1] California contains abundant sources of renewable and nonrenewable energy sources. Non-renewable resources include large crude oil and natural gas deposits that are located within six geological basins in the Central Valley and along the coast. Much of these reserves is concentrated in the southern San Joaquin Basin. Approximately 17 percent of the country's 100 largest oil fields are located in California, including the ninth largest oil field in the contiguous United States, the Belridge South Oil Field, located approximately 40 miles west of Bakersfield in the San Joaquin Valley.[2] Studies have also indicated that large undiscovered deposits of recoverable oil and gas lie offshore in the Outer Continental Shelf, although federal law currently prohibits new leases on oil and gas extraction in that area.

California is among the top states in the nation in net electricity generation from renewable resources.[3] The State leads the nation in net electricity generation from solar, geothermal, and biomass. California is also a leading producer of electricity from conventional hydroelectric power and from wind, ranking fourth in the nation in both. California has considerable solar potential, especially in the southeastern deserts and several of the world's largest solar thermal plants are located in California's Mojave Desert. Substantial geothermal resources are also found in California's coastal mountain ranges and in the volcanic areas of northern California, as well as along the border of Nevada and near the Salton Sea.

Although California's wind power potential is widespread, especially along the eastern and southern mountain ranges, much of the State is excluded from development of this resource because it is in wilderness areas, parks, or urban areas. California has one of the lowest per capita energy consumption rates in the country, partially attributable to energy-efficiency programs that have resulted in less energy consumption. As part of the overall economy, the transportation sector is responsible for the most energy consumption of any sector within the State. More motor vehicles are registered in California than in any other state, and commute times in California rank among some of the longest in the country. California also leads the nation in electricity generation from solar, geothermal, and biomass resources. Total electricity generated in July 2017 was 20,682,000 megawatt-hours.[4]

[1] U.S. Energy Information Administration, *California State Profile and Energy Estimates*, October 2017.
[2] U.S. Energy Information Administration, *Top 100 U.S. Oil and Gas Fields*, March 2015.
[3] California Energy Commission, *Final 2016 Integrated Energy Policy Report Update- Executive Summary*, February 2017.
[4] U.S. Energy Information Administration, *California State Profile and Energy Estimates*, October 2017.

LADWP Energy Resources and Use

LADWP serves an area covering 465 square miles that includes over four million residents and 1.4 million power customers. As of 2014, 40 percent of electricity was from coal, 22 percent from natural gas, 20 percent from renewable energy, nine percent from nuclear power, seven percent from other or unspecified sources of power, and two percent from large hydroelectric. Total daily generation capacity is over 7,640 megawatts, which allows approximately 23 million MWh in annual use.[5]

Metro Energy Use

Metro's contribution to regional energy consumption includes on-road vehicle fuel use (which is primarily compressed natural gas) and electricity for rail vehicle propulsion and maintenance and administrative facility operation. Table 3.4.1 presents the Metro system energy use by type of consumption between 2012 and 2016, as well as the change over that time.

Table 3.4.1. Metro Energy Consumption by End Use

Source Category	2012	2013	2014	2015	2016	% Change
Fuel Use (GGE)	42,490,623	43,930,100	44,710,242	43,995,037	42,796,606	-2.7%
Rail Propulsion (kWh)	199,093,552	229,866,746	210,937,940	198,921,473	209,327,358	4.7%
Facility Electricity Use (kWh)	97,500,044	90,099,301	94,144,097	116,146,856	118,782,141	2.3%

Note: GGE = Gasoline Gallon Equivalent. kWh = kilowatt hour
Source: Metro, 2017.

3.4.3. THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines Appendix F, "in order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy." Further, Appendix F of the CEQA Guidelines require that EIRs address the, "wise and efficient use of energy." In accordance with Appendix F of the CEQA Guidelines, a project would normally have a significant impact related to energy if it would:

- Conflict with adopted energy conservation plans;
- Use non-renewable resources in a wasteful or inefficient manner; and/or
- Result in a need for energy supplies and distribution infrastructure or capacity enhancing alterations to existing power or natural gas facilities, the construction of which could cause significant environmental effects.

[5] LADWP, *Power Facts and Figures*, 2017.

Additionally, Appendix F of the CEQA Guidelines recommends consideration of the following impact possibilities and potential energy conservation measures when preparing an EIR:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and requirements for additional capacity;
- The effects of the project on peak- and base-period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and/or
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

3.4.4. IMPACT ANALYSIS AND MITIGATION MEASURES

This section assesses potential impacts associated with the Proposed Project and, if necessary, identifies mitigation measures to eliminate or reduce impacts. The methodology implemented in this assessment consists of evaluating whether the Proposed Project would have significant energy impacts according to the above-stated thresholds.

Impact 3.4.1 Would the Proposed Project result in the use of non-renewable resources in a wasteful or inefficient manner that would conflict with adopted energy conservation plans?

Impact 3.4.2 Would the Proposed Project result in a need for energy supplies and distribution infrastructure or capacity enhancing alterations to existing power or natural gas facilities?

Impact Analysis

Less-than-Significant Impact. The following analysis includes the potential for impacts during construction and operational activities.

Construction

Construction of the Proposed Project is anticipated to begin in early Spring 2019 and finish in Fall 2023. During this time, construction activities would utilize energy resources primarily in the forms of petroleum-based fuels used to power off-road construction vehicles and equipment, construction worker travel, and delivery and haul truck trips; electricity associated with conveyance of water through the LADWP system that would be used for dust control; and energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber. Energy demand is assessed in the context of fuel and electricity use.

The petroleum-based fuel use was conservatively estimated assuming maximum intensity construction activities were occurring daily, such that all pieces of equipment were operating simultaneously and continuously. Construction activity assumptions used in this analysis are identical to the assumptions used for the air quality and GHG analyses and detailed in the Air Quality and Greenhouse Gas Technical Memorandum (Appendix B). Equipment horsepower and load factors were obtained from CalEEMod. Equipment fuel factors, gallons per horsepower-hour, were obtained from the SCAQMD *CEQA Air Quality Handbook*. Truck and worker vehicle fuel consumption factors were obtained from the CARB EMFAC2014 model.

While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. In addition, construction activities would be subject to compliance with applicable regulatory requirements designed to reduce consumption of energy resources. Specifically, Metro has adopted a Green Construction Policy committing to less polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions on all Metro construction projects performed on Metro properties and rights-of-way. The emission standards are more stringent than the statewide standards established by CARB and typically correspond to greater fuel efficiency than the standard statewide equipment fleet.

Also, CARB regulatory requirements would require idling of all diesel-fueled commercial vehicles over 10,000 pounds to be limited to five minutes at any location during construction. Compliance with this measure, among others, would reduce the consumption of petroleum-based fuels during construction activities.

Table 3.4.2 displays the petroleum-based fuel required by equipment, haul trucks and worker vehicles during construction activities. Also presented is the total combustion energy expressed in therms (100,000 British thermal unit).

Table 3.4.2. Fuel and Combustion Energy from Construction Activities

Vehicle Class	Fuel Type	Fuel Required (Gallons)	Combustion Energy (Therms)
Off-Road Heavy-Duty Equipment	Diesel	214,099	296,576
On-Road Heavy-Duty Trucks	Diesel	92,869	128,645
On-Road Passenger Vehicles	Gasoline	60,530	75,280

Source: Terry A. Hayes Associates Inc., 2018.

Electricity would be consumed through the conveyance of the water used during construction activities required for fugitive dust control during site preparation, excavation and grading. In accordance with SCAQMD Rule 403, it is anticipated that watering would occur three times daily to reduce fugitive dust emissions from material movement and travel on unpaved surfaces. Using standard methodology from CalEEMod, it was estimated that watering during construction activities would require approximately 2,567,000 gallons, resulting in the consumption of 24,969 kilowatt-hours of electricity associated with water distribution.

Additionally, electricity may be used to provide any necessary temporary power for lighting and electronic equipment inside and outside temporary construction trailers. This electricity, if needed, would either be supplied by LADWP, obtained from the existing electrical lines, from battery packs, or (to a lesser degree) from portable generators. Construction of electrical infrastructure is not anticipated to adversely affect the electrical infrastructure serving the surrounding uses, utility system capacity, or existing electrical infrastructure. Similar to the use of petroleum-based fuels, electricity consumed during construction would be temporary and cease upon completion of construction, as well as vary depending on site-specific operations and the amount of construction occurring at any given time. Furthermore, the electricity demand during construction would be slightly offset with the removal of the existing development on the Project Site, which currently generates a demand for electricity.

The on-site electrical system for the Proposed Project would consist of electrical lines, conduits, banks and transformers, as needed. New service installations and connections would be scheduled and implemented in a manner that would result in minimal to no electrical service interruptions to other properties. Compliance with LADWP's guidelines and requirements would ensure that Metro fulfills its responsibilities relative to infrastructure installation, coordinates any electrical infrastructure removals or relocations with LADWP, and limits any impacts associated with grading, construction and development within LADWP easements.

While it is difficult to measure the energy used in the production of construction materials such as asphalt, steel, and concrete, it is reasonable to assume that the production of construction materials would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. Compliance with Metro policies would result in the use of sustainable materials and recycled content, when feasible, that would reduce energy consumption during construction activities. Furthermore, the Proposed Project would incorporate best management practices outlined in Metro's Green Construction Policy, and sustainable practices for energy efficiency, water efficiency and conservation, and material conservation and resource efficiency would be incorporated into the Proposed Project as outlined in Metro's Sustainability Plan requirement.

Construction activities would not result in the wasteful, inefficient, or unnecessary use of energy resources, create energy utility system capacity problems, create problems with the provision of energy services, or result in a significant impact associated with the construction or new or expanded energy facilities. As discussed above, construction would not violate any local, State, or federal energy standards or consume a substantially greater amount of energy than other similar projects. Therefore, the Proposed Project would result in a less-than-significant impact related to energy resources.

Operations

The majority of operational energy use would be related to powering the rail cars and lighting the Project Site. The Proposed Project would replace an existing TPSS with a new, more efficient TPSS. Changes in electricity use related to the TPSS system would be minimal. There would be approximately 107 additional employees at the Project Site after completion of the

Proposed Project, which would result in the use of negligible amounts of regional transportation fuel.

Electricity transmission to the Project Site is provided and maintained by LADWP through a network of utility poles and underground utility lines. The existing Division 20 Rail Yard is well lit for maintenance and safety purposes. New lighting would be required for the storage yard north of the 1st Street Bridge. Electricity use at this location was estimated using data provided by the CalEEMod for surface parking lots. Metro provided facility data for existing electricity use at the Project Site, which supports 104 heavy rail vehicles. Proposed Project electricity use was estimated using the baseline consumption and maintenance of 282 heavy rail vehicles.[6,7] The Proposed Project would utilize approximately 38,880 megawatt-hours per year of electricity. That would be an average of approximately 107 megawatt-hours per day. It is anticipated that additional electricity use would be less than 0.2 percent of the LADWP total use of 63,014 megawatt-hours per day. The Proposed Project would not place a disproportionate burden on LADWP supply or off-site electrical infrastructure. As a result, the Proposed Project would not significantly increase electricity use from existing conditions.

The existing Division 20 Rail Yard uses 9,780 therms (977,767 cubic feet) per year of natural gas.[8] Based on the number of heavy rail vehicles maintained at the Project Site, natural gas consumption during operations would be approximately 26,519 therms (2,651,267 cubic feet) per year. The California Energy and Electric Utilities estimates natural gas consumption within the Southern California Gas Company (SoCalGas) planning area that encompasses the Project Site will be approximately 250,060 therms (25 million cubic feet) per day in 2024.[9] Annually, the SoCalGas planning estimates for 2024 are approximately 91,271,900 therms and 9,125,000,000 cubic feet. Based on these estimates, the Proposed Project would represent approximately 0.2 percent or less of available natural gas. The Proposed Project would not require the need for a new source of natural gas, nor would it place a disproportionate burden on the gas supply relative to similar projects.

The Proposed Project would allow Metro to operate the Purple Line Extension at full capacity and improve headways for the Red and Purple Lines. The Purple Line Extension would extend the existing Metro Purple Line heavy rail transit subway from its current terminus at the Wilshire/Western Station to a new western terminus near the Veterans Affairs West Los Angeles Medical Center. According to its Record of Decision, the Metro Purple Line Extension, "will reduce congestion by providing reliable, higher speed transit service. During peak periods, rail operating speeds are faster than speeds for a comparable trip by automobile, providing more reliability in travel time variation. The improved convenience of transit improvements in the corridor would encourage use of a public transit alternative that would reduce daily vehicle trips, VMT, and congestion on roadways."[10] Importantly for

[6]Metro, *E-mail Correspondence with Evan Rosenberg, Environmental Specialist*, February 1, 2018.
[7]Terry A. Hayes Associates Inc., *Energy Use Calculations for the Division 20 Rail Yard*, February 1, 2018.
[8]*Ibid*.
[9]California Gas and Electric Utilities, *2016 California Gas Report*, 2016.
[10]FTA, *Environmental Record of Decision for the Westside Subway Extension*, August 9, 2012.

regional energy consumption, the Proposed Project would assist in reductions in regional VMT and energy consumption.

Overall, the Proposed Project would be designed and constructed in accordance with State, City, and Metro green building standards that would serve to reduce the energy demand of the Proposed Project. The Proposed Project does not conflict with Metro design criteria or CCR, Title 24 including Part 1 - California Building Standards Administrative Code, Part 2 - California Building Code, Part 6 - California Energy Code, Part 11 - CALGreen, and Part 12 - California Reference Standards Code. In addition, energy demand would be within the existing and planned electricity and natural gas capacities. The Proposed Project would not violate State or federal energy standards or consume a substantial amount of energy in either construction or operation as compared to similar projects. Operational activities would not conflict with adopted energy conservation plans, use non-renewable resources in a wasteful or inefficient manner, and/or result in a need for energy supplies and distribution infrastructure or capacity-enhancing alterations to existing power or natural gas facilities. Therefore, the Proposed Project would result in a less-than-significant impact related to energy resources.

Mitigation Measures

This impact would be less than significant and does not require mitigation measures.