IV. Environmental Impact Analysis

E. Energy

1. Introduction

This section analyzes impacts on energy resources due to construction and operation of the Project. Section 15126.2 (b) of the California Environmental Quality Act (CEQA) Guidelines states that a project's energy use shall be analyzed to determine the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, as well as being compliant with building codes and renewable energy features. Appendix G of the State CEQA Guidelines Checklist, Section VI, Energy, includes questions to assist lead agencies when assessing a project's potential energy impacts. Additionally, State CEQA Guidelines Appendix F provides guidance on information to use when evaluating a project's energy use.

In accordance with the applicable Appendix G sections and utilizing guidance from Appendix F of the State CEQA Guidelines, this Draft EIR includes relevant information and analyses that address the energy implications of the Project, focusing on the following three energy resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). Detailed energy calculations can be found in Appendix F of this Draft EIR.

2. Environmental Setting

a. Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding energy at the federal, State, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Energy Independence and Security Act of 2007
- Corporate Average Fuel Economy Standards
- Federal Energy Policy and Conservation Act
- Warren-Alquist Act

- California Senate Bill 1389
- Renewables Portfolio Standards
- California Building Standards
  - California Building Energy Efficiency Standards
  - California Green Building Standards
- California Assembly Bill 1493
- California Air Resources Board
  - Scoping Plan
  - Advanced Clean Car Program
  - Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
  - In-Use Off-Road Diesel Fueled Fleets Regulation
- California Senate Bill 375
- Southern California Association of Governments 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy
- Metro's 2019 Climate Action and Adaptation Plan
- *Metro's Green Construction Policy*
- Metrolink Energy Management
- Green New Deal Initiative
- Green Building Code
- City of Los Angeles Mobility Plan 2035

(1) Federal

(a) Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national greenhouse gas (GHG) emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting mandatory Renewable Fuel Standards (RFS) that require fuel producers to use at least 36 billion gallons of biofuel in 2022;

- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014;

- Requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) actions described below (i) establishing miles per gallon (mpg) targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[1]

(b) Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) Standards (49 Code of Federal Regulations [CFR] Parts 531 and 533) reduce energy consumption by increasing the fuel economy of cars and light trucks. The NHTSA and the USEPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for (1) technological feasibility, (2) economic practicality, (3) effect of other standards on fuel economy, and (4) need for the nation to conserve energy. When these standards are raised, automakers respond by creating a more fuel-efficient fleet. In 2012, the NHTSA established final passenger car and light truck CAFE standards for model years 2017 through 2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3 to 41.0 mpg. Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The

[1] *A "green job," as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

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.[2] 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.[3]

(c) Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 (EPCA) is a United States Act of Congress that responded to the 1973 oil crisis by creating a comprehensive approach to federal energy policy. The primary goals of EPCA are to increase energy production and supply, reduce energy demand, provide energy efficiency, and give the executive branch additional powers to respond to disruptions in energy supply. Most notably, EPCA established the Strategic Petroleum Reserve, the Energy Conservation Program for Consumer Products, and CAFE regulations.

(2) State

(a) Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the California Energy Commission (CEC), which is the State's primary energy policy and planning agency. The legislation directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California; removed the responsibility of electricity demand forecasting from the utilities, which has a financial interest in high-demand projections, and transferred it to a more impartial CEC; and directed CEC to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources. Several regulatory entities administer energy policy throughout the State. The California Public Utilities Commission (CPUC) regulates privately owned utilities providing the telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation services.

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[2] *United States Environmental Protection Agency, Fact Sheet: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles, 2011.*

[3] *United States Environmental Protection Agency, Federal Register/Vol. 81, No. 206/Tuesday, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 2018.*

(b) California Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code [PRC] Sections 25300–25323; SB 1389) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (PRC Section 25301[a]). The 2017 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California including energy efficiency, strategies related to data for improved decisions in the Existing Buildings Energy Efficiency Action Plan, building energy efficiency standards, the impact of drought on California's 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's sources of crude oil, an update on California's nuclear plants, and other energy issues.

(c) Renewable Portfolio Standard

First established in 2002 under SB 1078, California's Renewables Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent by 2030.[4] SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent and (2) to double the energy savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. On September 10, 2018, former Governor Jerry Brown signed SB 100, which further increased California's RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030, and that the California Air Resources Board (CARB) should plan for 100-percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. The CPUC's responsibilities include (1) determining annual procurement targets and enforcing compliance, (2) reviewing and approving each investor-owned utility's

[4] *California Public Utilities Commission, California Renewables Portfolio Standard (RPS), 2018.*

renewable energy procurement plan, (3) reviewing contracts for RPS-eligible energy, and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.[5]

(d) California Building Standards

(i) California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR], Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020.[6] The 2019 Title 24 standards continue to improve upon the 2016 Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings, which include efficiency improvements to the residential standards for attics, walls, water heating, and lighting, and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2017 national standards.[7]

(ii) California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (CCR, Title 24, Part 11) are commonly referred to as the CALGreen Code. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.[8] The 2019 CALGreen Code improves upon the 2016 CALGreen Code by updating standards for bicycle parking, electric vehicle charging, and water efficiency and conservation. The 2019 CALGreen Code went into effect on January 1, 2020. Refer to Section IV.D, Greenhouse Gas Emissions, of this Draft EIR for additional details regarding these standards.

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[5] *California Public Utilities RPS Program Overview, 2018.*

[6] *California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, 2018.*

[7] *California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, 2018.*

[8] *California Building Standards Commission, Guide to the 2016 California Green Building Standards Code Nonresidential, 2018.*

(e) California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, Assembly Bill (AB) 1493 (commonly referred to as CARB's Pavley regulations), enacted on July 22, 2002, requires CARB to set GHG emission standards for new passenger vehicles, light duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025.[9,10] Refer to Section IV.D, Greenhouse Gas Emissions, of this Draft EIR for additional details regarding this regulation.

(f) California Air Resources Board

(i) Scoping Plan

AB 32 required CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code [HSC] Section 38561(h)). The 2008 Climate Change Scoping Plan proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[11] The 2008 Climate Change Scoping Plan had a range of GHG reduction actions, which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade program, and an AB 32 implementation fee to fund the program.

The 2008 Climate Change Scoping Plan called for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy

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[9] *California Air Resources Board, Clean Car Standards—Pavley, Assembly Bill 1493 ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley, accessed July 15, 2022.*

[10] *United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017–2025 Cars and Light Trucks, 2012.*

[11] *CARB, Climate Change Scoping Plan, 2008.*

sources through implementation of the RPS.[12] Additionally, the 2008 Climate Change Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas will be accomplished through "improving energy efficiency by 25 percent."

The 2008 Climate Change Scoping Plan identified several specific issues relevant to the development projects, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

  > *A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.*

- The importance of supporting the California Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The Climate Change Scoping Plan notes that water use requires significant amounts of energy, including approximately one-fifth of Statewide electricity.

- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 million metric tons of CO_2e ($MMTCO_2e$) using the Global Warming Potential (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (SAR). Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California must make to return to the 1990 emissions level by 2020

[12] *For a discussion of Renewables Portfolio Standard, refer to subsection California Renewables Portfolio Standard.*

as required by AB 32. CARB originally defined the "business-as-usual" or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 Climate Change Scoping Plan, as approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. Therefore, under these original projections, the State would have had to reduce its 2020 BAU emissions by 28.4 percent to meet the 1990 target of 427 $MMTCO_2e$. This target was met in 2016 and the 2017 Scoping Plan set a new target of 40 percent below BAU emissions levels by 2030.

(ii) Advanced Clean Cars Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations[13]. The program requires a greater number of zero-emission vehicle (ZEV) models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles and the ZEV regulations to require manufacturers to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025. In particular, implementation of the ZEV and PHEV regulations reduce transportation fuel consumption by increasing the number of vehicles that are partially or fully electric-powered.

(iii) 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 in order to reduce public exposure to diesel particulate matter emissions (Title 13 CCR Section 2485). The measure applies to 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 does not allow diesel-fueled commercial vehicles to idle for more than five 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.

[13] *California Air Resources Board, Clean Car Standards—Pavley, Assembly Bill 1493, ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley, accessed July 15, 2022.*

(iv) In-Use Off-Road Diesel Fueled Fleets Regulation

Because off-road vehicles that are used in construction and other related industries can last 30 years or longer, most of those that are in service today are still part of an older fleet that do not have emission controls. In 2007, CARB approved the "In-Use Off-Road Diesel Fueled Fleets Regulation" to reduce emissions from existing (in-use) off-road diesel vehicles that are used in construction and other industries. This regulation sets an anti-idling limit of 5 minutes for all off-road vehicles 25 horsepower and up. It also establishes emission rates targets for the off-road vehicles that decline over time to accelerate turnover to newer, cleaner engines and require exhaust retrofits to meet these targets. Revised in October 2016, the regulation enforced off-road restrictions on fleets adding vehicles with older tier engines beginning July 1, 2014. By each annual compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year or has completed the Best Available Control Technology requirements (BACT). Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028. While the goal of this regulation 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 the use of more fuel-efficient engines.

(g) SB 375 (Sustainable Communities Strategy)

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associate with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

(3) Regional

(a) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

SB 375 requires each MPO to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plan. In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and

thereby reduce GHG emissions from these sources. For the SCAG region, the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted on September 3, 2020, is the current RTP/SCS and is an update to the 2016–2040 RTP/SCS.

The 2020–2045 RTP/SCS focuses on the continued efforts of the previous RTP/SCS plans for an integrated approach in transportation and land use strategies in development of the SCAG region through horizon year 2045. The 2020–2045 RTP/SCS projects that the SCAG region will meet the GHG per capita reduction targets established for the SCAG region of 8 percent by 2020 and 19 percent by 2035. Additionally, its implementation is projected to reduce VMT per capita for the year 2045 by 4.1 percent compared to baseline conditions for the year. Rooted in the 2008 and 2012 RTP/SCS plans, the 2020–2045 RTP/SCS includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by location housing, jobs, and transit closer together, and increasing investments in transit and complete streets.

(b) Metro's 2019 Climate Action and Adaptation Plan

Approved by the Metro Board of Directors on September 24, 2020, the Moving Beyond Sustainability Plan establishes agency-wide sustainability goals, targets, and strategies for the next ten years. The Moving Beyond Sustainability Plan includes goals regarding energy, water, emissions and pollution control, materials and construction/operations, climate adaptation and resiliency, livable neighborhoods, equity, and economic and workforce development. Metro has also prepared the 2019 Climate Action and Adaptation Plan (2019 CAAP) that commits the agency to reducing GHG emissions by 79 percent relative to 2017 levels by 2030 and 100 percent by 2050. The 2019 CAAP identified a goal of reducing Metro's GHG emissions per boarding by 5 percent from 2010 to 2020. The 2019 CAAP updated the agency's commitment to reducing operational GHG emissions by 79 percent relative to 2017 levels by 2030 and 100 percent by 2050. While the intent of the 2019 CAAP is to reduce GHG emissions from Metro operations, the 2019 CAAP contains a number of energy efficiency measures such as use of LED lighting and water conservation measures to reduce GHG emissions associated with energy consumption.

(c) Metro's Green Construction Policy

Metro adopted a Green Construction Policy in August 2011 and is committed to using more sustainable construction equipment and vehicles as well as implementing best practices, to reduce harmful diesel emissions from all Metro construction projects performed on Metro properties and in Metro right of ways. The Green Construction Policy encourages the use of construction equipment with technologies such as hybrid drives and specific fuel economy standards, both of which are methods to reduce GHG emissions during the construction period. From January 2015 onwards, the Green Construction

Policy has required all off-road, diesel-powered construction equipment greater than 50 horsepower to meet Tier 4 off-road emission standards at a minimum.

(d) Metrolink Energy Management

Metrolink has implemented a number of sustainability polices related to energy use. These policies include:

- Locomotive fleet modernization study to explore engine conversion options for older Tier 2 locomotives and other Metrolink locomotive fleets to Tier 4 or other alternative propulsion technologies which are zero emissions such as hybrid, battery and hydrogen applications.
- A fuel conservation program designed to reduce train idling by 35 percent system-wide and by 50 percent at the Central Maintenance Facility (CMF).
- An electric train car mover to shuttle rail cars at the CMF thereby reducing reliance on locomotive diesel fuel.
- Support vehicles include electric, hybrid, low-emissions and flex-fuel varieties.

Metro has implemented several policies and plans to enhance energy efficiency throughout its system. In June 2007, the Board adopted the Energy and Sustainability Policy. The purpose of the Policy is to control energy consumption and embrace energy efficiency, energy conservation, and sustainability. 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.

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 2019 Energy and Resource Reports, which analyzes the sustainability and environmental performance of Metro operational activities during the 2018 calendar year. In 2018 alone, Metro reduced total energy consumption by 7.9 percent compared to 2017 as a result of reduced vehicle fuel consumption by buses and support vehicles. Metro surpassed its goal of 33 percent renewable energy consumption by 2020. In 2018, 31 percent of Metro's electricity came from renewable energy sources, including its own solar photovoltaic systems. These strategies actively reduce GHG emissions, 95 percent of which are derived from energy use.

The Sustainable Rail Plan supports the implementation of the ECMP by identifying strategies that directly reduce energy used by rail operations, auxiliary systems, propulsion, and facilities. Specifically, the plan provides detailed recommendations that apply to the ECMP sections regarding key equipment upgrades and powerful sustainability and investment-grade opportunities to explore. While the ECMP addresses Metro's broader energy use and procurement strategy, this plan specifically addresses the rail system and analyzes in detail the energy efficiency opportunities within Metro's rail equipment and operations.

(4) Local

(a) Green New Deal

On April 8, 2015, Mayor Eric Garcetti released the Sustainable City pLAn, which includes both short-term and long-term aspirations through the year 2035 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.[14] Specific targets included the construction of new housing units within 1,500 feet of transit by 2017, reducing VMT per capita by five percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. The Sustainable City pLAn was intended to be updated every four years.

In April 2019, Mayor Eric Garcetti released an update to the Sustainable City pLAn renamed as L.A.'s Green New Deal, which consists of a program of actions designed to create sustainability-based performance targets through 2050 to advance economic, environmental, and equity objectives.[15] The Green New Deal augments, expands, and elaborates in more detail the City's vision for a sustainable future, and it tackles the climate emergency with accelerated targets and new aggressive goals.

(b) Green Building Code

Chapter IX of the Los Angeles Municipal Code (LAMC) is referred to as the "Los Angeles Green Building Code," which incorporates by reference portions of the CALGreen Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. The Los Angeles Green Building Code includes mandatory measures for newly constructed nonresidential and high-rise residential buildings. The Los Angeles Green

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[14] *City of Los Angeles, Sustainable City pLAn, 2015.*

[15] *City of Los Angeles, LA's Green New Deal, 2019.*

Building Code includes some requirements that are more stringent than State requirements, such as increased requirements for EV charging spaces and water efficiency, which result in potentially greater energy demand reductions from improved transportation fuel efficiency and water efficiency.

(c) City of Los Angeles Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City of Los Angeles' (City) General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the latest amendment on September 7, 2016.[16] The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. The Mobility Plan includes five main goals that define the City's high-level mobility priorities:

(1) Safety First;

(2) World Class Infrastructure;

(3) Access for All Angelenos;

(4) Collaboration, Communication, and Informed Choices; and

(5) Clean Environments and Healthy Communities.

Each of the goals contains objectives and policies to support the achievement of those goals. The Project's general consistency with the applicable goals, objectives, and policies set forth in the Mobility Plan adopted for the purpose of avoiding or mitigating an environmental effect is discussed in Table 3 of Appendix I of this Draft EIR.

b. Existing Conditions

(1) Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site

[16] *Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, approved by City Planning Commission on June 23, 2016, and adopted by City Council on September 7, 2016.*

distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy capacity, or electrical power, is generally measured in watts (W) while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

The Los Angeles Department of Water and Power (LADWP) provides electricity throughout the City and many areas of the Owens Valley, serving approximately four million people within a service area of approximately 465 square miles, excluding the Owens Valley. Electricity provided by LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District includes the LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The Project's Site Locations and static displays to be removed are located within LADWP's Metropolitan Planning District and Valley Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP has a net dependable generation capacity greater than 7,531 MW.[17] In 2017, the LADWP power system experienced an instantaneous peak demand of 6,432 MW.[18] Approximately 37 percent of LADWP's 2020 electricity purchases were from renewable sources, which is better than the 33-percent Statewide percentage of electricity purchases from renewable sources.[19] LADWP's annual electricity sale to customers for the 2017–2018 fiscal year, the most current year for which data are available, was approximately 22,383 million kWh.[20]

LADWP supplies electrical power to Metro's existing static displays from electrical service lines located in the Project vicinity. Existing electricity usage was estimated based

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[17] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Section 1, p. 17.*

[18] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, December 2017.*

[19] *LADWP, 2020 Power Content Label, October 2020.*

[20] *Los Angeles Department of Water and Power, 2018 Retail Electric Sales and Demand Forecast, 2018, p. 15.*

on the same methodology contained in the GHG analysis included in Section IV.G, Greenhouse Gas Emissions, of this Draft EIR. Specifically, the California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate the existing electricity usage by inputting into the program the size of the land uses, the electrical demand factors for the land uses, electrical intensity factors related to water usage, and the estimated existing VMT at the Project Site. It is estimated that approximately 200 static displays currently consume approximately 1,000,000 kWh of electricity per year.

(2) Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of the State's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel. Natural gas is measured in terms of cubic feet (cf).

Natural gas is provided to the Project Site by the Southern California Gas Company (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.8 million customers in more than 500 communities encompassing approximately 20,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border.[21]

SoCalGas receives gas supplies from several sedimentary basins in the western United States and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada, as well as local California supplies.[22] The traditional, southwestern United States sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport.[23] Gas supply available to SoCalGas from California sources averaged 87 million cf per day in 2020 (the most recent year for which data are available).[24]

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[21] *SoCalGas, Company Profile, www.socalgas.com/about-us/company-profile, accessed July 15, 2022.*

[22] *California Gas and Electric Utilities, 2020 California Gas Report, pp. 111-112.*

[23] *California Gas and Electric Utilities, 2020 California Gas Report, pp. 111-112.*

[24] *California Gas and Electric Utilities, 2021 Supplemental California Gas Report, p. 28.*

SoCalGas supplies natural gas to the Project's proposed Site Locations from natural gas service lines located in the Project vicinity.

The existing static displays do not consume natural gas. In addition, proposed Site Locations are currently vacant and do not contain structures which consume natural gas. Therefore, existing natural gas usage is zero.

(3) Transportation Energy

According to the CEC, transportation accounts for nearly 40 percent of California's total energy consumption in 2018.[25] In 2018, California consumed 15.6 billion gallons of gasoline and 3.1 billion gallons of diesel fuel.[26,27] Petroleum-based fuels currently account for 90 percent of California's transportation energy sources.[28] However, the State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, 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 from the transportation sector, and reduce VMT. According to the California Department of Tax and Fee Administration, total Statewide gasoline consumption has increased by six percent from 2011 to 2019.[29] However, this increase is mainly due to population increases as the per capita gasoline consumption is showing a downward trend.[30] The CEC predicts that there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity.[31] According to CARB's EMFAC Web Database, Los Angeles County on-road transportation sources consumed 4.03 billion gallons of gasoline and 0.59 billion gallons of diesel fuel in 2020.[32]

The proposed Site Locations are currently vacant. Transportation fuel usage generated by motor vehicle trips to and from the existing static displays for maintenance

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[25] *U.S. Energy Information Administration, California State Profile and Energy Estimates, Consumption by Sector, www.eia.gov/state/?sid=CA#tabs, accessed July 15, 2022.*

[26] *California Board of Equalization, Net Taxable Gasoline Gallons 10-Year Report.*

[27] *California Board of Equalization, Net Taxable Diesel Gallons 10-Year Report.*

[28] *CEC, 2021–2023 Investment Plan Update for the Clean Transportation Program, November 2021.*

[29] *California Department of Tax and Fee Administration, Fuel Taxes Statistics & Reports, www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed July 15, 2022.*

[30] *Eno Center for Transportation, How Have Different State Populations Changed Their Gasoline Consumption?, www.enotrans.org/article/how-have-different-state-populations-changed-their-gasoline-consumption/, May 21, 2019, accessed July 25, 2022.*

[31] *CEC, 2015 Integrated Energy Policy Report, docketed June 29, 2016, p. 113.*

[32] *California Air Resources Board, EMFAC2017 Web Database, www.arb.ca.gov/emfac/2017/, accessed July 15, 2022 Details provided in Appendix F of this Draft EIR.*

and sign change out is approximately 10 trips per day to service approximately 200 static displays. The estimate of annual VMT associated with the existing static displays is 31,631 VMT per year.[33] This translates to 3,854 gallons of diesel per year based on current (2022) fuel economy averages.[34]

3. Project Impacts

a. Thresholds of Significance

In accordance with Appendix G to the CEQA Guidelines, the Project would have a significant impact related to energy if it would:

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

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

With regard to Threshold (a), this analysis relates to Appendix F to the CEQA Guidelines, prepared in response to the requirement in PRC Section 21100(b)(3) that an EIR shall include a detailed statement setting forth "[m]itigation measures proposed to minimize significant effects of the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."

In accordance with Appendix F, the following factors were considered in determining whether the Project would have a significant impact with regard to Threshold (a):

1. The Project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the Project on local and regional energy supplies and on requirements for additional capacity.

3. The effects of the Project on peak and base period demands for electricity and other forms of energy.

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[33] *Eyestone Environmental, Energy Calculations for the Metro TCN Project, see Appendix F of this Draft EIR.*

[34] *Eyestone Environmental, Energy Calculations for the Metro TCN Project, see Appendix F of this Draft EIR.*

4. The degree to which the Project complies with existing energy standards.

5. The effects of the Project on energy resources.

6. The Project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

With regard to Threshold (b), the Project was evaluated for consistency with adopted energy conservation plans and policies relevant to the Project. Such adopted energy conservation plans and policies include Title 24 energy efficiency requirements, CALGreen Code, Metro's 2019 Climate Action and Adaptation, Metro's Green Construction Policy, Metrolink Energy Management, Metro and City building codes. Also, as discussed in Section IV.G, Greenhouse Gas Emissions, of this Draft EIR, the Project was also evaluated for consistency with the 2020–2045 RTP/SCS, which includes goals to reduce VMT and corresponding decrease in fuel consumption.

b. Methodology

CEQA Guidelines Appendix F provides topics that the lead agency may consider in the discussion of energy use in an EIR:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle 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 on 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.

- The project's projected transportation energy use requirements and its overall use of efficient transportation activities.

(1) Construction

During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control (including supply and conveyance) and, on a limited basis, powering lights, electronic equipment, or other

construction activities necessitating electrical power. [35] Electricity usage associated with the supply and conveyance of water used for dust control during construction was calculated using CalEEMod.[36] Electricity used to power lighting, electronic equipment, and other construction activities necessitating electrical power was calculated based on data provided in South Coast Air Quality Management District (SCAQMD) construction surveys (i.e., construction activity, horsepower, load factor, and hours of use per day).[37] Although the Site Locations would use electricity from poles where possible, electricity demand calculations were based on SCAQMD construction surveys which identifies the use of diesel generators to supply construction sites with electrical power.

In terms of natural gas, construction activities typically do not involve the consumption of natural gas and current plans do not involve use of natural gas powered construction equipment.

Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Site Locations, construction worker travel to and from the Site Locations, and delivery and haul truck trips (e.g., the hauling of demolition material to offsite reuse and disposal facilities). Fuel consumption from onsite, heavy-duty construction equipment was calculated based on the equipment mix and usage factors provided in the CalEEMod construction output files included in Appendix F of this Draft EIR. The total horsepower was then multiplied by fuel usage estimates per horsepower-hour included in Table A9-3-E of the SCAQMD *CEQA Air Quality Handbook*. Fuel consumption from construction worker, vendor, and delivery/haul trucks was calculated using the trip rates and distances provided in the CalEEMod construction output files. Total VMT was then calculated for each type of construction-related trip and divided by the corresponding county-specific miles per gallon factor using CARB's EMFAC 2017 model (EMFAC2017). EMFAC provides the total annual VMT and fuel consumed for each vehicle type. Consistent with CalEEMod, construction worker trips were assumed to include 50 percent light duty gasoline auto and 50 percent light duty gasoline trucks. Construction vendor and delivery/haul trucks were assumed to be heavy-duty diesel trucks. Refer to Appendix F of this Draft EIR for detailed calculations.

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[35] *Construction activities include demolition of the existing site, site preparation, grading, building construction, building finishes, landscaping and paving.*

[36] *California Air Pollution Control Officers Association, CalEEMod™ version 2020.4.0 User's Guide, May 2021.*

[37] *CalEEMod Users Guide, Appendix E1, Technical Source Documentation, October 2017.*

(2) Operation

Annual consumption of electricity was calculated using demand factors provided in CalEEMod as part of the GHG analysis included in Section IV.G, Greenhouse Gas Emissions, of this Draft EIR. As mentioned above, electricity usage and natural gas consumption is calculated based on default energy demand factors contained within CalEEMod for the Project land uses.

Energy impacts associated with transportation during operation were also assessed. Daily Project-related trips are estimated to be two trips per day for maintenance of TCN Structures. The daily Project-related trips were then input into CalEEMod, which calculated the annual VMT. Based on this annual VMT, gasoline and diesel consumption rates were calculated using the county-specific miles per gallon calculated using EMFAC2017. The vehicle fleet mix for vehicles anticipated to visit the Site Locations was calculated consistent with the CalEEMod default for Los Angeles County.

CalEEMod output files are provided in the Air Quality Appendix C and supporting calculations are provided in the Energy Appendix F of this Draft EIR. These calculations were used to determine, as required by Appendix F guidelines, if the Project would cause the wasteful, inefficient, and/or unnecessary consumption of energy.

c. Project Design Features

No Project Design Features related to energy are proposed as part of the Project. However, the Project would comply with the Metro Green Construction Policy and is committed to using more sustainable construction equipment and vehicles as well as implementing best practices to reduce harmful diesel emissions from all Metro construction projects performed on Metro properties and in Metro rights-of-way. From January 2015 onwards, the Green Construction Policy has required all off-road, diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum. These features would reduce Project fuel consumption by requiring use of more efficient equipment and vehicles in comparison to the average fleet within Southern California.

In addition, the Project would implement a number of measures consistent with the Metro's 2019 CAAP which would reduce energy consumption during operations. Such measures include use of 100 percent renewable energy by Year 2035, use of LED lighting at Metro-owned properties, and replace non-revenue vehicles with battery electric vehicles.

d. Analysis of Project Impacts

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

(1) Impact Analysis

The following analysis considers the seven factors in the Thresholds of Significance subsection above to determine whether Threshold (a) would be exceeded.

> *(a) 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.*

As discussed above, the Project would consume energy during construction and operational activities. Sources of energy for these activities would include electricity usage, and transportation fuels, such as diesel and gasoline. Natural gas would not be consumed during Project construction or operations. The analysis below includes the Project's energy requirements and energy use efficiencies by fuel type for each stage of the Project (demolition, construction, operations, maintenance, and removal activities).[38]

For purposes of this analysis, Project maintenance would include activities, such as repair of TCN Structures and architectural coatings, which could potentially use electricity and petroleum-based fuels. Energy usage related to Project maintenance activities are assumed to be included as part of Project operations. The Project would remove at a minimum approximately 200 existing static displays, which require monthly trips for maintenance and advertisement change out. Removal of the static displays would also reduce the mobile trips needed for maintenance, resulting in a net decrease in fuel usage. Project removal activities would include demolition of the proposed TCN Structures following their construction and/or abandonment of the Site Locations. However, it is not known when the TCN Structures would be removed. Therefore, analysis of energy usage related to Project removal activities are too speculative for evaluation. For this reason, impacts related to the energy usage of the removal or abandonment of the Project were not analyzed.

[38] *Removal activities relate to the life of a project.*

(i) Construction

During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electric equipment, or other construction activities necessitating electrical power. Most Site Locations would not have access to water on-site. Water for construction activities was assumed to be supplied with water trucks. Fuel usage as well as electricity to convey water was included in the construction energy inventory. Electricity from these construction activities would be limited in comparison to existing operational electricity usage for the static displays to be removed, given that construction activities for each TCN Structure Site Location would be limited and temporary. As discussed below, construction activities, including the construction of TCN Structures, typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the Site Locations, construction worker travel to and from the Site Locations, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities, as well as trips associated with the delivery of the TCN Structure materials).

As shown in Table IV.E-1 on page IV.E-24, a total of 16,669 kWh of electricity, 788 gallons of gasoline, and 72,959 gallons of diesel are estimated to be consumed during Project construction. The construction schedule assumes that construction would begin in 2023 with completion in 2025.

Electricity

During construction of the Project, electricity would be consumed to supply and convey water for dust control and, on a limited basis, may be used to power lighting, electric equipment, and other construction activities necessitating electrical power. Electricity would be supplied to the Site Locations by LADWP and would be obtained from the existing or nearby electrical lines that connect to the Project Site. If existing or nearby electrical lines are not available, electricity would be supplied using generators.

As shown in Table IV.E-1, a total of approximately 16,669 kWh of electricity are anticipated to be consumed during Project construction. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, with the demolition and grading phases having the greatest demand and would cease upon completion of construction. When not in use, electric equipment would be powered off to avoid unnecessary energy consumption. In addition, although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (longer than 120 days) providing illumination for the Project Site and staging areas would also comply with applicable Title 24 requirements, which include limits

Table IV.E-1
Summary of Energy Use During Project Construction[a]

Fuel Type	Quantity
Electricity	
Water Consumption	8,202 kWh
Lighting, Electric Equipment, and Other Construction Activities Necessitating Electrical Power[b]	8,467 kWh
Total Electricity[c]	**16,669 kWh**
Gasoline	
On-Road Construction Equipment	788 gallons
Off-Road Construction Equipment	0 gallons
Total Gasoline	**788 gallons**
Diesel	
On-Road Construction Equipment	23,675 gallons
Off-Road Construction Equipment	49,284 gallons
Total Diesel	**72,959 gallons**

kWh = kilowatt hours

[a] *Detailed calculations are provided in Appendix F of this Draft EIR.*

[b] *Electricity usage is based on SCAQMD construction site survey data and typical requirements for power generators. Such electricity demand would be temporary, limited, and would cease upon the completion of construction. Electricity would preferably be supplied through LADWP connections. However, if these connections are not available, electricity would be supplied using generators.*

Source: Eyestone Environmental, 2022.

on the wattage allowed per specific area, which result in the conservation of energy.[39] As such, the demand for electricity during construction would not cause wasteful, inefficient, and unnecessary use of energy, and impacts would be less than significant.

Natural Gas

Construction activities, including the construction of the TCN Structures, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support Project construction activities; thus, there would be no demand generated by construction. The Project also does not anticipate use of natural gas powered construction equipment. As such, the energy requirements and energy use of the Project related to natural gas during construction would result in no impact and not cause wasteful, inefficient, and unnecessary use of energy.

[39] *California Building Energy Efficiency Standards, Title 24, Part 6, §110.9, §130.0, and §130.2.*

Transportation Energy

The petroleum-based fuel use summary provided in Table IV.E-1 on page IV.E-24 represents the amount of transportation energy that could potentially be consumed during Project construction based on a conservative set of assumptions, provided in Appendix F of this Draft EIR. The construction energy analysis assumes that all equipment would be operating continuously (8 hours per day) throughout the entire duration of construction. However, under real world typical conditions, most equipment would be operating less than 8 hours per day. As shown in Table IV.E-1, on- and off-road vehicles would consume an estimated 788 gallons of gasoline and approximately 72,959 gallons of diesel fuel for the Project's construction.

Moreover, trucks and equipment used during proposed construction activities would comply with CARB's anti-idling regulations as well as the In-Use Off-Road Diesel-Fueled Fleets regulation and the Metro Green Construction Policy. In addition to reducing criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy and reduce fuel consumption. Furthermore, on-road vehicles (i.e., haul trucks, worker vehicles) would be subject to federal fuel efficiency requirements. Therefore, Project construction activities would comply with existing energy standards with regard to transportation fuel consumption. As such, the demand for petroleum-based fuel during construction would not cause wasteful, inefficient, and unnecessary use of energy, and impacts would be less than significant.

Construction Materials

The energy analysis does not include a full life cycle analysis of energy usage that would occur over the production/transport of materials used during the construction of the Project or used during the operational life of the Project, or the end of life for the materials and processes that would occur as an indirect result of the Project. Estimating the energy usage associated with these processes would be too speculative for meaningful consideration, would require analysis beyond the current state-of-the-art in impact assessment, and may lead to a false or misleading level of precision in reporting. Manufacture and transport of materials related to Project construction and operation is expected to be regulated under regulatory energy efficiency requirements. Therefore, it is assumed that energy usage related to construction and operational materials would be consistent with current regulatory requirements regarding energy usage and, therefore, not wasteful, inefficient, or unnecessary, and impacts would be less than significant.

(ii) Operation

During operation of the Project, energy would be consumed mainly for lighting and display purposes. Energy would also be consumed during Project operations related to maintenance activities vehicle trips. As shown in Table IV.E-2 on page IV.E-26, the

Table IV.E-2
Summary of Annual Energy Use During Project Operation[a]

Source	Estimated Energy Demand		
	Operation (Project)	Existing	Project Net
Electricity			
Digital Displays[b]	3,288,690 kWh	1,000,000 kWh	2,288,690 kWh
Total Electricity[c]	3,288,690 kWh	1,000,000 kWh	2,288,690 kWh
Transportation (On-Road Vehicles)			
Gasoline	0 gal	0 gal	0 gal
Diesel	732 gal	3,660 gal	-2,928 gal
Total Transportation	732 gal	3,660 gal	-2,928 gal

cf = cubic feet

gal = gallons

kWh = thousand kilowatt hours

[a] *Detailed calculations are provided in Appendix Fof this Draft EIR. Totals may not precisely add up due to rounding.*

[b] *The signage on the TCN Structures would be required to comply with the 2022 Title 24 energy efficiency standards specific to outdoor lighting. In addition, the Project would remove existing static displays which may use older inefficient lighting and replace it with digital displays using LED lighting.*

[c] *Electricity estimates assume compliance with applicable CALGreen Code and the Metro Climate Action and Adaptation Plan which requires use of LED lighting at Metro owned properties.*

Source: Eyestone Environmental, 2022.

Project's net increase energy demand would be approximately 2,288,690 kWh of electricity per year. The Project would also result in a net decrease of 2,928 gallons of diesel fuel per year consumed.

Electricity

As shown in Table IV.E-2, with compliance with Title 24 standards and applicable CALGreen Code requirements, the TCN Structures would result in a net Project demand for electricity totaling approximately 2,288,690 kWh per year. The signage on the TCN Structures would be required to comply with the 2022 Title 24 energy efficiency standards specific to outdoor lighting. In addition, the Project would remove existing static displays which may use older inefficient lighting and construct the digital displays which would use LED lighting. These measures would further reduce the Project's energy demand. As CalEEMod is based on 2019 Title 24 standards, this analysis conservatively does not take into account additional energy usage reductions under 2022 Title 24. Future iterations of

Title 24 are expected to increase energy efficiency requirements and the Project would be required to comply with the latest Title 24 standards.

LADWP is required to procure at least 33 percent of their energy portfolio from renewable sources by 2020.[40] The current sources procured by LADWP include wind, solar, and geothermal sources. These sources account for 37 percent of LADWP's overall energy mix in 2020, the most recent year for which data are available.[41] This represents the available off-site renewable sources of energy that would meet the Project's energy demand. In addition, the Project would implement a number of measures consistent with the Metro's 2019 CAAP which would reduce GHG emissions during operations. Such measures include use of 100 percent renewable energy by Year 2035. The use of renewable energy would indirectly reduce use of fossil fuels (e.g., natural gas, coal, oil) required for electricity generation. While the electricity usage rate for a given land use would not be directly affected by the availability of renewable energy, the consumption of fossil fuels required for electricity generation would be reduced.

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2025-2026 fiscal year (the Project's buildout year) would be 23,537 GWh of electricity.[42,43] As such, the Project-related annual electricity consumption of 2,288,690 kWh per year would represent less than 0.1 percent of LADWP's projected sales in 2025. In addition, as previously described, the Project would incorporate a variety of energy conservation measures to reduce energy usage and additional efficiency requirements under various regulations, such as Title 24 energy efficiency requirements, CALGreen Code, Metro's 2019 CAAP, as well as Metro and City building codes, which may further reduce Project-related consumption. As such, the demand for electricity during operation would not cause wasteful, inefficient, and unnecessary use of energy, and impacts would be less than significant.

Natural Gas

The Project is not expected to generate on-site demand for natural gas and no connections are expected to be made to SoCalGas's network. The Project would have no impacts from use of natural gas.

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[40] *Executive Order S-14-08*

[41] *LADWP, 2020 Power Content Label, October 2020.*

[42] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[43] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1, December 2017.*

Stationary Sources

The Project would not include any stationary sources such as emergency generators or boilers. The Project would have no impacts from use of stationary sources.

Transportation Energy

During operation, Project-related vehicle trips would result in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. Trips and VMT associated with the Project would be limited to infrequent maintenance of the TCN Structures. It was assumed that up to two vehicle roundtrips per day would take place during maintenance activities for all 56 TCN Structures.

The existing static displays currently require changing of signage on a monthly basis. Removal of the static displays would also eliminate the vehicle trips required for maintaining the static displays. While the Project would require occasional maintenance, the number of trips and fuel usage associated with maintenance would be greatly reduced in comparison to the existing static displays.

As summarized in Table IV.E-2 on page IV.E-26, when accounting for the measures that would be implemented to reduce VMT, the Project's estimated petroleum-based fuel usage would result in a net reduction of 2,928 gallons of diesel per year consumed due to the removal of the existing static displays and associated maintenance trips. Detailed calculations demonstrating reductions in transportation fuel usage are provided in Appendix F of this Draft EIR. As such, the demand for petroleum-based fuel usage during operation would not cause wasteful, inefficient, and unnecessary use of energy, and impacts would be less than significant.

(iii) Summary of Energy Requirements and Energy Use Efficiencies

As previously discussed, CEQA Guidelines Appendix F recommends quantification of a project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed. The Project's energy requirements were calculated based on the methodology contained in CalEEMod for electricity and natural gas usage. Project VMT data were calculated based on CalEEMod default trip lengths. The calculations also took into account energy efficiency measures, such as Title 24, CALGreen Code, Metro's 2019 CAAP, as well as Metro and City building codes, and vehicle fuel economy standards. Table IV.E-1 and Table IV.E-2 on pages IV.E-24 and IV.E-26, respectively, provide a summary of Project construction and operational energy usage, respectively. During Project construction activities, a total of 16,669 kWh of electricity would be consumed along with 73,747 gallons of transportation fuel (gasoline and diesel). During Project operations, 2,288,690 kWh of electricity and no

natural gas would be consumed on an annual basis. The Project would also result in a net reduction of 2,928 gallons of transportation fuel consumption. Detailed calculations demonstrating this reduction are provided in Appendix F of this Draft EIR.

The TCN Structures provide off site advertising that would direct funds to new and expanded transportation programs including the potential to fund bus electrification programs and further improve the experience for bus passengers. While specific details are not yet known regarding bus electrification, this measure would reduce the amount of transportation fuel usage throughout Metro's operations.

(b) The effects of the project on local and regional energy supplies and on requirements for additional capacity

(i) Construction

As discussed above, electricity would be intermittently consumed during the conveyance of the water used to control fugitive dust, as well as to provide electricity for temporary lighting and other general construction activities.[44] 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. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. The Project's estimated construction electricity usage represents approximately 1.6 percent of the estimated Project Site's existing annual operational demand, which, as discussed below, would be within the supply and infrastructure service capabilities of LADWP.[45] Construction activities, including the construction of new structures, typically do not involve the consumption of natural gas. Transportation fuel usage during Project construction activities would represent less than 0.001 percent of gasoline usage and 0.01 percent of diesel usage within Los Angeles County, respectively.[46] As energy consumption during Project construction activities would be relatively negligible, the Project would not materially affect local and regional energy supplies during the construction period or require additional capacity, and impacts would be less than significant.

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[44] *Electricity usage for water conveyance assumes treatment and transport of water to a pumping location. However, trucks would be needed to transport water from the pumping location to the site which requires consumption of transportation fuel. Transportation fuel usage for transport of water was included in the Project's energy analysis.*

[45] *The percentage is derived by taking the total amount of electricity usage during construction (16,669 kWh) and dividing that number by the total amount of electricity usage during existing conditions (1,000,000 kWh) to arrive at 1.6 percent.*

[46] *Calculated based on EMFAC2017 for Buildout Year using Los Angeles County data. Please refer to Appendix F for detailed calculations.*

(ii) Operation

Based on LADWP's 2017 Power Strategic Long-Term Resources Plan, LADWP forecasts that its total energy sales in the 2025–2026 fiscal year (the Project's buildout year) would be 23,537 GWh of electricity.[47,48] As such, the Project-related operational increase in annual electricity consumption of 2,288,690 kWh per year would represent less than 0.1 percent of LADWP's projected sales in 2025.[49] [50] Therefore, LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to support the Project's operational electricity demand.

As stated above, the Project would not consume natural gas during operations. Therefore, Project operations would not affect SoCalGas's energy supplies. At buildout, the operation of the Project would result in a net decrease of 2,928 gallons of diesel per year as shown in Appendix F of this Draft EIR.

In sum, energy consumption during Project operations would not materially affect LADWP's and SoCalGas' energy supplies or requirements for additional capacity. As such, impacts would be less than significant.

(c) The effects of the project on peak and base period demands for electricity and other forms of energy

As discussed above, the electricity demand and transportation energy consumption would be well within the available regional supplies and overall capacity of LADWP, SoCalGas, and California refineries, respectively. The Project's energy demand and consumption are negligible compared to available supplies during both construction and operation.

Electricity demand during construction (16,669 kWh) and operation (2,288,690 kWh) of the Project would have a negligible effect on the overall capacity of LADWP's power grid and base load conditions. With regard to peak load conditions, the LADWP power system experienced an all-time high peak of 6,432 MW on August 31, 2017.[51] In 2018, the LADWP power system experienced a peak of 6,195 MW on July 6, 2018. LADWP also estimates a peak load based on two years of data known as base case peak demand to

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[47] *LADWP defines its future electricity supplies in terms of sales that will be realized at the meter.*

[48] *LADWP, 2017 Power Strategic Long-Term Resources Plan, Appendix A, Table A-1, December 2017.*

[49] *LADWP, 2017 Power Strategic Long-Term Resources Plan, December 2017, Appendix A.*

[50] *2.288690 GWh ÷ 23,537 GWh × 100 = 0.0097%*

[51] *LADWP, 2018 Retail Electric Sales and Demand Forecast. p. 6.*

account for typical peak conditions. Based on LADWP estimates for 2018, the base case peak demand for the power grid is 5,820 MW.[52] The Project would consume 502 kW during peak load conditions. In comparison to the LADWP power grid base peak load of 5,820 MW in 2018, the Project's electricity demand would represent approximately 0.01 percent of the LADWP base peak load conditions.[53] In addition, LADWP's annual growth projection in peak demand of the electrical power grid of 0.4 percent would be sufficient to account for future electrical demand by the Project.[54] Therefore, Project electricity consumption during operational activities would have a negligible effect on peak load conditions of the power grid.

As mentioned above, the Project would not consume natural gas during operations. Therefore, Project natural gas demand during operational activities would have a negligible effect on peak demands of the natural gas supplies.

The electricity supplies would be sufficient to serve the Project's peak energy demand. Thus, the Project's electricity demand during operational activities would have a negligible effect on demand during peak and base load periods of the power grid, and impacts would be less than significant.

(d) The degree to which the project complies with existing energy standards

Although Title 24 requirements typically apply to energy usage for buildings, long-term construction lighting (greater than 120 days) providing illumination for the Project Site and staging areas would be subject to Title 24 such as limits on the wattage allowed per specific area. However, the construction duration for each TCN structure is anticipated to be four weeks. Therefore, long-term construction lighting would not be required for the Project In addition, construction equipment would comply with energy efficiency requirements contained in the Federal Energy Independence and Security Act or previous Energy Policy Acts for electrical motors and equipment.[55] The Project would not consume natural gas during operations. Electricity usage during Project operations presented in Table IV.E-2 on page IV.E-26 would comply with 2019 Title 24 standards and applicable CALGreen Code, Metro's Green Construction Policy, and Los Angeles Green Building Code requirements. Therefore, Project construction and operational activities would comply with existing energy standards with regards to electricity.

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[52] *LADWP, 2018 Retail Electric Sales and Demand Forecast. p. 6.*

[53] *The percentage is derived by taking the peak electricity usage during Project operations (502 kW) and dividing that number by the LADWP base case peak demand of 5,820,000 kWh (5,820 MWh) to arrive at 0.01 percent.*

[54] *LADWP, 2018 Retail Electric Sales and Demand Forecast. p. 6.*

[55] *Energy Independence and Security Act of 2007. Pub.L. 110-140.*

With regard to transportation fuels, trucks, and equipment used during proposed construction activities, the Project would comply with CARB's anti-idling regulations, as well as the In-Use Off-Road Diesel-Fueled Fleets regulation. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in efficient use of construction-related energy. During Project operations, vehicles traveling to and from the Site Locations are assumed to comply with CAFE fuel economy standards. Project-related vehicle trips would also comply with Pavley and LCFS, which are designed to reduce vehicle GHG emissions but would also result in fuel savings in addition to CAFE standards, as required.

Based on the above, Project construction and operational activities would comply with existing energy standards with regards to electricity and transportation fuel consumption, and impacts would be less than significant.

(e) Effects of the Project on Energy Resources

As discussed above, LADWP's electricity generation is derived from a mix of non-renewable and renewable sources, such as coal, natural gas, solar, geothermal wind and hydropower. The LADWP's 2017 Power Strategic Long-Term Resources Plan (SLTRP) identifies adequate resources (natural gas, coal) to support future generation capacity. The LADWP 2017 Power SLTRP contains an analysis of actions to maintain regulatory requirements for providing electricity while accommodating for population growth within the region. As the Project would be receiving electricity from the LADWP, the Project's construction and operational activities would have a negligible effect on the region's electricity supply.

Natural gas supplied to Southern California is mainly sourced from out of state, with a small portion originating in California. Sources of natural gas for the Southern California region are obtained from locations throughout the western United States, as well as Canada.[56] According to the U.S. Energy Information Administration (EIA), the United States currently has over 84 years of natural gas reserves based on 2019 production.[57] Project construction and operations would not utilize natural gas. Therefore, Project construction and operation activities would have a negligible effect on natural gas supply.

With regard to on-site energy resources, the Project Site does not contain any significant sources of renewable (i.e., water, solar, wind, geothermal) or non-renewable energy, such as coal, natural gas, or petroleum. In addition, the Project would not generate

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[56] *California Gas and Electric Utilities, 2020 California Gas Report.*

[57] *U.S. Energy Information Administration, Frequently Asked Questions www.eia.gov/tools/faqs/faq.php?id=58&t=8, accessed July 15, 2022.*

power using non-renewable sources or associated energy transmission lines. Therefore, the Project construction and operation activities would not conflict with existing or planned energy resources.

Transportation fuels (gasoline and diesel) are produced from crude oil, which is imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of consumption.[58] The Project would also comply with CAFE fuel economy standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicle trips would also comply with Pavley and LCFS, which are designed to reduce GHG emissions, but would also result in fuel savings in addition to compliance with CAFE standards. The Project would also reduce the number of maintenance trips required in comparison to the existing static displays which require change out of signage on a monthly basis. This would result in a net decrease in transportation fuel usage during Project operations. Therefore, Project construction and operation activities would have a negligible effect on the transportation fuel supply, and impacts would be less than significant.

As discussed above in Subsection 2.c, Regulatory Framework, one of the objectives of SB 350 is to increase procurement of California's electricity from renewable sources from 33 percent to 50 percent by 2030. However, in September 2018, SB 100 was signed, which requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 50-percent renewable resources target by December 31, 2026, and 60-percent by December 31, 2030. Accordingly, LADWP is required to procure at least 60 percent of their energy portfolio from renewable sources by 2030. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources account for 37 percent of LADWP's overall energy mix in 2020, the most recent year for which data are available.[59] This represents the available off-site renewable sources of energy that would meet the Project's energy demand. The Project's use of renewable energy would indirectly reduce use of fuels (e.g., natural gas, coal, oil) required for electricity generation. While the Project's electricity usage rate would not be directly affected by the availability of renewable energy, the Project's usage of renewable energy would indirectly avoid consumption of fossil fuels.

With regard to on-site renewable energy sources, due to the Site Locations, other on-site renewable energy sources would not be feasible to install onsite as there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydroelectric, digester gas, methane, fuel cells, landfill gas, municipal solid waste,

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[58] *BP Global, Oil Reserves, www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil/oil-reserves.html.*

[59] *LADWP, 2020 Power Content Label, October 2020.*

ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels. Furthermore, wind-powered energy is not viable on the Site Locations due to the lack of sufficient wind in the Los Angeles basin. Specifically, based on a map of California's wind resource potential, the Site Locations are not identified as an area with wind resource potential.[60]

Based on the above, the Project's electricity consumption would not affect energy resources of LADWP. The Project would also comply with CAFE fuel economy standards and encourage alternative modes of transportation resulting in a negligible effect on transportation fuel resources. The Project would also comply with Title 24 requirements for solar energy and would not affect the renewable energy resources within the region. However, on-site renewable energy sources would not be feasible for the TCN Structures. Given the limited footprint and design of the TCN Structures, solar panels would not be feasible as part of the Project. Therefore, the Project would not affect energy resources, and impacts would be less than significant.

(f) The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives

As discussed above, the Project would not generate trips or VMT on a regular basis. The digital displays would require fewer maintenance trips in comparison to the existing static displays and would result in a net reduction in VMT during operations. Updates to digital displays would be performed electronically and not require physically changing out the advertisement as done with static displays. While the Project would not directly reduce VMT within the region, features such as providing real-time traffic data and alternative routes would help improve traffic flow and reduce vehicle delay time. These measures would further promote a reduction in vehicle delay times and subsequent reduction in transportation fuel usage from reduced vehicle idling. In addition, the TCN Structures would generate advertising revenue for new or expanded transportation programs including the potential for bus electrification. These measures would reduce the amount of transportation fuel usage throughout Metro's operations. Therefore, the Project would encourage the use of efficient transportation alternatives, and impacts would be less than significant.

Based on the above, with compliance with State and local energy efficiency standards, the Project would meet and/or exceed applicable energy conservation policies and regulations, and impacts would be less than significant.

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[60] *CEC, Wind Project and Wind Resource Areas, 2018.*

(g) Conclusion Regarding Threshold (a)

As demonstrated in the analysis above, the Project would not result in potentially significant environmental impacts due to wasteful, inefficient, and unnecessary consumption of energy resources during construction or operation. The Project's energy requirements would not significantly affect local and regional supplies or require additional capacity. The Project's energy usage during peak and base periods would also be consistent with electricity future projections for the region. As also discussed, gasoline fuel usage for the region is expected to be on the decline over the next 10 years. The Project's transportation fuel consumption is also expected to decline based on more stringent CAFE fuel economy standards. As transportation fuel supply is not expected to decrease significantly over this same period, supplies would be sufficient to meet Project demand. Therefore, electricity generation capacity and supplies of transportation fuels would also be sufficient to meet the needs of Project-related construction and operations. With respect to operation, the Project would comply with existing energy efficiency requirements, such as CALGreen Code, as well as include energy conservation measure requirements. **In summary, for all the reasons set forth above, the Project's energy demands would not cause wasteful, inefficient, or unnecessary use of energy. Therefore, Project impacts related to energy use under Threshold (a) would be less than significant with respect to both construction and operation.**

(2) Mitigation Measures

Project level impacts related to energy use would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project level impacts related to energy use was determined to be less than significant without mitigation. Therefore, no mitigation measures are required, and the impact level would remain less than significant.

Threshold (b): Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

(1) Impact Analysis

The energy conservation policies and plans relevant to the Project include the California Title 24 energy standards, the 2019 CALGreen Code, Metro's Green Construction Policy, Metro's CAAP the City of Los Angeles Green Building Code, City of LA Green New Deal, and SCAG's 2020–2045 RTP/SCS. As these conservation policies would be incorporated as part of the Project, The Project would not conflict with applicable plans for renewable energy or energy efficiency. Such requirements of the Title 24,

CALGreen Code, and the City's Green Building Code include specific lighting requirements to conserve energy. The Project would implement these measures as required by code. The 2019 Title 24 standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices.

With regard to transportation uses, the Project would not generate trips or VMT on a regular basis. The removal of existing static displays would result in a net reduction in maintenance trips and VMT in comparison to the Project. In addition, the TCN Structures would relay traffic information to the public such as traffic congestion events and provide travel alternatives to maximum efficiency of the congested road network reducing fuel consumption. Further, the TCN Structures would provide off-site advertising create funds for new and expanded transportation programs including the potential to fund GHG reduction measures such as bus electrification programs and programs to further improve the experience for bus passengers. While these actions may not directly reduce VMT, the increase in efficiency of the roadway would reduce travel and delay times throughout the region.

These features including compliance with the Metro CAAP, reduction in vehicle congestion and delay times would serve to reduce the consumption of electricity and transportation fuel. Based on the above, the Project would be consistent with adopted energy conservation plans.

In addition, vehicle trips generated during Project operations would comply with CAFE fuel economy standards. During construction activities, the Project would be required to comply with CARB anti-idling regulations and the In-Use Off-Road Diesel Fleet regulations reducing unnecessary energy consumption.

Based on the above, the Project would not conflict with or obstruct adopted energy conservation plans or violate State or local energy standards for renewable energy or energy efficiency. **Therefore, Project impacts related to regulatory consistency under Threshold (b) would be less than significant.**

(2) Mitigation Measures

Project level impacts related to conflicts with plans would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project level impacts related to conflicts with plans were determined to be less than significant without mitigation. Therefore, no mitigation measures are required, and the impact level would remain less than significant.

e. Cumulative Impacts

(1) Impact Analysis

(a) Threshold (a) (Wasteful, Inefficient, and Unnecessary Use of Energy)

Cumulative impacts occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area. The geographic context for the cumulative analysis of electricity is LADWP's service area. While the geographic context for transportation-related energy use is more difficult to define, it is meaningful to consider the Project in the context of County-wide consumption. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

(i) Electricity

Buildout of the Project, and additional growth forecasted to occur in the City would increase electricity consumption during Project construction and operation and therefore, cumulatively increase the need for energy supplies and infrastructure capacity, such as new or expanded energy facilities. LADWP forecasts that its total energy sales in 2025–2026 fiscal year (the Project buildout year) will be 23,537 GWh of electricity. Based on the Project's estimated net electrical consumption of 2,288,690 kWh per year, the Project would account for approximately 0.04 percent of LADWP's projected sales for the Project's buildout year. Although future development would result in the use of renewable and non-renewable electricity resources during construction and operation, which could limit future availability, the use of such resources would be on a relatively small scale given the sizes and types of uses proposed by the related projects included within the RTP/SCS, Metro Vision 2028 Strategic Plan, 2020 Long Range Transportation Plan, NextGen Bus Plan, and Sidewalk and Transit Amenity Program as further described in Section III. Environmental Setting of this Draft EIR. The related projects included therein, would be reduced by measures similarly implemented for the Project such as those required by Metro and LAMC requirements, and would be consistent with growth expectations for LADWP's service area.

As discussed above, the LADWP has developed the Power Strategic Long-Term Resources Plan, which is a long range planning document identifying electricity generation resources and demand forecasts over the next 20 years. These demand forecasts take into account population and employment growth, new construction permits, and new energy efficiency requirements in the future. The most recent LADWP Power Strategic Long-Term Resources Plan, released in 2017, identifies adequate resources to support future generation capacity. The LADWP would be expected to continue to expand

electrical capacity to meet demand increases within its service area as future evaluations of capacity and demand forecasts are conducted. Future development projected in the RTP/SCS, Metro Vision 2028 Strategic Plan, 2020 Long Range Transportation Plan, NextGen Bus Plan, and Sidewalk and Transit Amenity Program would also be reviewed by LADWP to identify necessary power facilities and available capacity to provide for individual projects. In addition, the Project would also incorporate energy efficiency measures to comply with the 2019 Title 24 standards, which represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the ZNE goal." Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards.[61] Furthermore, other future development projects would be expected to incorporate the same energy conservation features as the Project, comply with applicable regulations, including the CALGreen Code and State energy standards under Title 24, and incorporate mitigation measures, as necessary.

Additionally, as discussed above, LADWP is required to procure at least 33 percent of its energy portfolio from renewable sources by 2020. The current sources of renewable energy procured by LADWP include wind, solar, and geothermal sources. These sources accounted for 37 percent of LADWP's overall energy mix in 2020, the most recent year for which data are available.[62] This represents the available offsite renewable sources of energy that could meet the energy demand of the Project and other future development projects. Therefore, the Project and related projects within LADWP's service area would comply with energy conservation plans and efficiency standards required to ensure that energy is used efficiently.

As such, the Project's contribution to cumulative impacts related to the wasteful, inefficient, and unnecessary use of electricity would not be cumulatively considerable and, therefore, would be less than significant; and the cumulative impact of the Project's incremental effect and the effects of related projects related to wasteful, inefficient, and unnecessary use of electricity would be less than significant.

(ii) Natural Gas

As stated above, the Project would not consume natural gas on a regular basis during operations. Buildout of the Project in the SoCalGas service area would not cumulatively increase the need for natural gas supplies and infrastructure capacity, such as new or expanded natural gas facilities.

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[61] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*

[62] *LADWP, 2020 Power Content Label, October 2020.*

As such, the Project's contribution to cumulative impacts related to the wasteful, inefficient, and unnecessary use of natural gas would not be cumulatively considerable and, therefore, would be less than significant; and the cumulative impact of the Project's incremental effect and the effects of related projects related to wasteful, inefficient, and unnecessary use of natural gas would be less than significant.

(iii) Transportation Energy

Buildout of the Project, the related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the State and region. As described above, at buildout, the Project would consume 732 gallons of diesel per year. However, when taking into account removal of existing static displays, the Project would result in a net decrease of 2,928 gallons of diesel per year, as shown in Appendix F of this Draft EIR.

Project transportation fuel usage would represent a small percentage of total fuel consumption within Los Angeles County. As the Project would result in a net decrease in operational fuel usage, it is expected that cumulative transportation fuel usage resulting from the Project would not affect future supplies of transportation fuel.

Additionally, as described above, petroleum currently accounts for 90 percent of California's transportation energy sources; however, over the last decade the State has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled, which would reduce reliance on petroleum fuels. According to the California Department of Tax and Fee Administration, gasoline consumption has increased by six percent from 2011 to 2019.[63] However, this increase is mainly due to population increases as the per capita gasoline consumption is showing a downward trend.[64] The CEC also predicts that there will be an increase in the use of alternative fuels, such as natural gas, biofuels, and electricity.

Furthermore, the Project would not conflict with the energy efficiency policies emphasized by SCAG's 2020–2045 RTP/SCS. The Project would result in a reduction in

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[63] *California Department of Tax and Fee Administration, Fuel Taxes Statistics & Reports (December 2020—Motor Vehicle Fuel 10 Year Report), www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed July 15, 2022.*

[64] *Eno Center for Transportation, How Have Different State Populations Changed Their Gasoline Consumption?, www.enotrans.org/article/how-have-different-state-populations-changed-their-gasoline-consumption/, May 21, 2019, accessed July 15, 2022.*

maintenance trips and VMT with the removal of existing static displays. The digital displays would require fewer maintenance trips in comparison to the existing static displays which need to be changed on a monthly basis.

Although the 2020–2045 RTP/SCS is intended to reduce GHG emissions, the reduction in VMT would also result in reduced transportation fuel consumption. By its very nature, the 2020–2045 RTP/SCS is a regional planning tool that addresses cumulative growth and resulting environmental effects.

For these reasons, the Project's contribution to cumulative impacts related to the wasteful, inefficient and unnecessary use of transportation fuel would not be cumulatively considerable and, therefore, would be less than significant; and the cumulative impact of the Project's incremental effect and the effects of related projects related to wasteful, inefficient and unnecessary use of transportation fuel would be less than significant.

(iv) Conclusion

Based on the analysis provided above, the Project's contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas, and fuel) would not be cumulatively considerable and, therefore, would be less than significant; and the cumulative impact of the Project's incremental effect and the effects of related projects related to the wasteful, inefficient, and unnecessary consumption of energy during construction or operation would be less than significant. As such, the cumulative energy impacts associated with the Project and the related projects under Threshold (a) are concluded to be less than significant.

(b) Consistency with State or Local Plans

The Project as well as future development projects, would be required to comply with energy conservation and renewable energy plans and policies described above, including Title 24, CALGreen Code, Metro's Green Construction Policy, Metro's CAAP, and the City of Los Angeles Green Building Code, as applicable. As related projects would be required to meet the same energy consumption standards, there would be no significant cumulative impacts with regard to consistency with energy conservation plans.

Furthermore, as described above, the Project would not conflict with the policies emphasized by the 2020–2045 RTP/SCS and Metro's CAAP. The Project would not generate vehicle trips on a regular basis during operations and would result in a net reduction in VMT due to the removal of the existing static displays and associated maintenance trips. As the Project would result in a net reduction in VMT and associated

fuel usage, the Project would not result in cumulative impacts with regard to consistency with the 2020-2045 RTP/SCS and Metro's CAAP.

For these reasons, the Project's contribution to cumulative impacts related to consistency with adopted energy conservation plans, or State or local energy standards for renewable energy or energy efficiency would not be cumulatively considerable and, therefore, would be less than significant; and the cumulative impact of the Project's incremental effect and effects of related projects related to consistency with adopted energy conservation plans, or State or local energy standards for renewable energy or energy efficiency would be less than significant.

(2) Mitigation Measures

Cumulative impacts related to energy use and conflicts with plans would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance after Mitigation

Cumulative impacts related to energy use and conflicts with plans were determined to be less than significant without mitigation. Therefore, no mitigation measures are required, and the impact level would remain less than significant.