

IV. Environmental Impact Analysis

C. Greenhouse Gas Emissions

1. Introduction

This section of the Draft EIR provides a discussion of global climate change, existing regulations pertaining to global climate change, an evaluation of the Project's consistency with plans adopted for the reduction or mitigation of greenhouse gas (GHG) emissions, an inventory of the GHG emissions that would result from the Project, and an analysis of the potential impact of these GHG emissions. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B to this Draft EIR.

2. Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.¹

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of

¹ USEPA, 1/19/17 Snapshot, *Climate Change: Basic Information*, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed August 15, 2019.

natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the “enhanced greenhouse effect” to distinguish it from the natural greenhouse effect.²

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO₂) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.³ Global increases in CO₂ concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO₂ GHG, these have also increased significantly since 1900.⁴ In particular, studies have concluded that it is very likely that the observed increase in methane (CH₄) concentration is predominantly due to agriculture and fossil fuel use.⁵

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the “Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol,” avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels.

In December 2015, the US entered into the Paris Agreement which has a goal of keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and limit the temperature increase further to 1.5 degrees Celsius. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals. In 2017, the US announced intentions to withdraw from the

² *Pew Center on Global Climate Change, Climate Change 101: Understanding and Responding to Global Climate Change.*

³ *C. Le Quéré, et al., Global Carbon Budget 2014, (Earth System Science Data, 2015, doi:10.5194/essd-7-47-2015).*

⁴ *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed August 19, 2019.*

⁵ *USEPA, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.*

agreement. The earliest effective date of the withdrawal is November 2020, however, as of January 2021, the U.S. has formally rejoined the agreement.⁶

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), “Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California has a relatively more energy-efficiency economy compared to the rest of the nation. California has relied much less on coal and more on natural gas compared to the rest of the nation. The SCAG region, with close to half of the State’s population and economic activities, is also a major contributor to the global warming problem.”⁷

a. GHG Background

GHGs include CO₂, CH₄, nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).⁸ Carbon dioxide is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential than CO₂. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO₂, denoted as CO₂e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the aforementioned GHGs is provided in Table IV.C-1 on page IV.C-4.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO₂. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. A summary of the atmospheric

⁶ *The White House Briefing Room, Paris Climate Agreement, January 20, 2021, www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/, accessed September 2, 2021.*

⁷ *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

⁸ *As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.*

**Table IV.C-1
Description of Identified GHGs^a**

Greenhouse Gas	General Description
Carbon Dioxide (CO₂)	An odorless, colorless GHG, which has both natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO ₂ are burning coal, oil, natural gas, and wood.
Methane (CH₄)	A flammable gas and the main component of natural gas. When one molecule of CH ₄ is burned in the presence of oxygen, one molecule of CO ₂ and two molecules of water are released. A natural source of CH ₄ is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH ₄ , which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.
Nitrous Oxide (N₂O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF₆)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF₃)	An inorganic, non-toxic, odorless, non-flammable gas. NF ₃ is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

^a GHGs identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

Source: Association of Environmental Professionals, *Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007*; United States Environmental Protection Agency, *Acute Exposure Guideline Levels (AEGs) for Nitrogen Trifluoride; January 2009*.

lifetime⁹ and GWP of selected gases is presented in Table IV.C-2 on page IV.C-6. As indicated below, GWPs range from 1 to 22,800.

b. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.¹⁰ These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion;
- The Sierra snowpack would decline between 70 and 90 percent by the end of the century, threatening California's water supply;
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts;
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures and salt water contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO₂; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and

⁹ *Atmospheric lifetime is defined as the time required to turn over the global atmospheric burden. Source: Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001 (TAR), Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, p. 247.*

¹⁰ *State of California, Department of Justice, Office of the Attorney General, Climate Change Impacts in California, <https://oag.ca.gov/environment/impact>, accessed July 28, 2020.*

**Table IV.C-2
Atmospheric Lifetimes and Global Warming Potentials**

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50–200	1
Methane (CH ₄)	12 (+/-3)	25
Nitrous Oxide (N ₂ O)	114	298
HFC-23: Fluoroform (CHF ₃)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH ₂ FCF ₃)	14	1,430
HFC-152a: 1,1-Difluoroethane (C ₂ H ₄ F ₂)	1.4	124
PFC-14: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC-116: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800
Nitrogen Trifluoride (NF ₃)	740	17,200

^a *Global Warming Potentials and associated CO₂e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) reports GHG emission inventories for California using the GWP values from the IPCC AR4. Therefore, the analysis below reflects the GWP values from IPCC AR4. Although the IPCC has released AR5 with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards.*

Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials, www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed July 28, 2020.

(3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.¹¹

¹¹ *Paul R. Epstein, et al., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.*

c. Regulatory Framework

In response to growing scientific and political concern with global climate change, federal and state entities have adopted a series of laws to reduce emissions of GHGs to the atmosphere, which are discussed herein.

(1) Federal

(a) *Federal Clean Air Act*

The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO₂ and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The U.S. Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a “reasonable explanation” for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs “are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes.” The USEPA further found that “atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act.” The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.¹² While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On April 4, 2012, USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel-fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO₂ per MW-hour (CO₂/MWh) on an average annual basis, subject to certain exceptions.

¹² USEPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule*, www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed August 20, 2019.

(b) Corporate Average Fuel Economy (CAFE) Standards

In 2010, President Barack Obama issued a memorandum directing the USEPA, United States Department of Transportation (USDOT), the United States Department of Energy (USDOE), and the National Highway Traffic Safety Administration (NHTSA) to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021. On March 31, 2020, the USEPA and NHTSA issued fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model year 2021 standards through model year 2026.¹³ These standards apply to both passenger cars and light trucks. In addition, California’s waiver under the Clean Air Act to establish more stringent standards was revoked. However, this waiver revocation is currently being challenged in court. While these actions are being challenged in court, President Joseph Biden has directed agencies to revisit the standards and is expected to reverse the revocation of California’s waiver. On January 20, 2021, President Biden issued an Executive Order directing all executive departments and agencies to review and take action, as appropriate, to address Federal regulations and “other actions taken during the last four years (2017-2021) “that conflict with the new Administration’s climate and environmental justice goals, which included SAFE.¹⁴ In June 2021, the EPA held a public hearing to reconsider the previous withdrawal of California’ Advanced Clean Car Program Waiver.¹⁵ The comment period for this public hearing closed in July 2021.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the

¹³ *Federal Register*, 49 CFR Parts 523, 531, 533, 536, and 537, *The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*.

¹⁴ *The White House, Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/, accessed March 8, 2021.

¹⁵ *U.S. EPA, Notice of Reconsideration of a Previous Withdrawal of a Waiver for California’s Advanced Clean Car Program (Light-Duty Vehicle Greenhouse Gas Emission Standards and Zero Emission Vehicle Requirements)*, www.epa.gov/regulations-emissions-vehicles-and-engines/notice-reconsideration-previous-withdrawal-waiver.

USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.¹⁶

In August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about \$170 billion.¹⁷

(c) Energy Independence and Security Act

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

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires 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 USEPA and NHTSA actions described above, (i) establishing miles per gallon 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.

¹⁶ *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

¹⁷ *U.S. EPA, EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond, August 2016.*

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.”¹⁸

(2) State

(a) *Executive Order S-3-05, Executive Order B-30-15, and Executive Order B-55-18*

Executive Order S-3-05, issued by Governor Schwarzenegger in June 2005, established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for the California Environmental Protection Agency (CalEPA) to report every two years on the State’s progress toward meeting the Governor’s GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels;¹⁹
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.²⁰

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32) and Senate Bill 32, respectively, both of which are discussed below. However, the Legislature has not yet adopted a target for the 2050 horizon year.

¹⁸ *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.*

¹⁹ *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?, July 3, 2013.*

²⁰ *CARB, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

As a result of Executive Order S-3-05, the California Climate Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under Executive Order S-3-05. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in Executive Order S-3-05.²¹

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. “Intelligent transportation systems” refers to the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and services.²²

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, the California Air Resources Board (CARB) would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

In October 2020, CARB released a study which evaluated three scenarios that achieve Carbon Neutrality in California by 2045. The study will be used by CARB in development of the 2022 Scoping Plan update.²³ More ambitious carbon reduction scenarios that achieve carbon neutrality prior to 2045 may be considered as part of future analyses by the State.

The scenarios analyzed to achieve carbon neutrality include a High Carbon Dioxide Removal (CDR) scenario, Zero Carbon Energy scenario, and a Balanced scenario. The High CDR scenario achieves GHG reductions by relying on CO₂ removal strategies. The

²¹ CalEPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006.

²² CalEPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006, p. 58.

²³ *Energy+Environmental Economics, Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board*, October 2020.

High CDR scenario would require 80 million metric tons (MMT) of CO₂ to be removed by CDR strategies in order to achieve carbon neutrality. The Zero Carbon Energy scenario is based on the assumption of zero-fossil fuel emissions by 2045. The Zero Carbon Energy scenario would require 33 MMT of CO₂e to be removed by CDR strategies in order to achieve carbon neutrality. The Balanced scenario represents a middle point between the High CDR scenario and Zero Carbon Energy scenario. The Balanced scenario would require 56 MMT of CO₂e to be removed by CDR strategies in order to achieve carbon neutrality. The scenarios would achieve at least an 80-percent reduction in GHGs by 2045, relative to 1990 levels without reliance on CDR. Remaining CO₂e would be reduced to zero by applying carbon dioxide removal strategies, including sinks from natural and working lands and negative emissions technologies like direct air capture.²⁴

Under each of these scenarios, CARB proposed reduction strategies for various sectors that contribute GHG emissions throughout the State. Although specific details are not yet available for the GHG reduction measures discussed above, implementation of these measures would require regulations to be enforced by the State.

(b) Assembly Bill 32 (California Global Warming Solutions Act of 2006) and Senate Bill 32

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels;²⁵ and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and

²⁴ *Energy+Environmental Economics, Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board, October 2020, p. 22.*

²⁵ *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?, July 3, 2013.*

regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.²⁶

Senate Bill (SB) 32, signed September 8, 2016, updates AB 32 (the Global Warming Solutions Act) to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

(c) Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* (referred to herein as the 2008 Climate Change Scoping Plan), as required by AB 32.²⁷ Subsequently, CARB approved updates to the 2008 Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32.

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.”²⁸ The 2008 Climate Change Scoping Plan identified 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 system, 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

²⁶ CARB’s list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.

²⁷ *Climate Change Proposed Scoping Plan* was approved by CARB on December 11, 2008.

²⁸ CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008.

use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard.²⁹ Additionally, the 2008 Climate Change Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through “improving energy efficiency by 25 percent.”

The *2008 Climate Change Scoping Plan* identified a number of specific issues relevant to the Project, 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 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 *2008 Climate Change Scoping Plan* noted 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.

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 had to make to return to the 1990 emissions level by 2020 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*. For example, in

²⁹ For a discussion of Renewables Portfolio Standard, refer to subsection 2.c.(2)(f)(i), *California Renewables Portfolio Standard*, on page IV.C-21.

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. In the *2008 Climate Change Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).³⁰

Subsequent to adoption of the *2008 Climate Change Scoping Plan*, a lawsuit was filed challenging CARB's approval of the *Climate Change Scoping Plan Functional Equivalent Document (FED to the Climate Change Scoping Plan)*. On May 20, 2011 (Case No. CPF-09-509562), the Court found that the environmental analysis of the alternatives in the *FED to the Climate Change Scoping Plan* was not sufficient under the California Environmental Quality Act (CEQA). CARB staff prepared a revised and expanded environmental analysis, and the *Supplemental FED to the Climate Change Scoping Plan* was approved on August 24, 2011 (*Supplemental FED*). The *Supplemental FED* indicated that there is the potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the *2008 Climate Change Scoping Plan*.

As part of the *Supplemental FED*, CARB updated the projected 2020 BAU emissions inventory based on then-current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS.³¹ In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent Renewable Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a

³⁰ CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008, p. 12.

³¹ Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. Pavley I could potentially result in 27.7 million metric tons CO₂e reduction in 2020. Pavley II would cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO₂e.

reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.^{32,33}

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework (First Update)*.³⁴ The stated purpose of the First Update was to “highlight... California’s success to date in reducing its GHG emissions and lay...the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.”³⁵ The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.³⁶

In conjunction with the First Update, CARB identified “six key focus areas comprising major components of the State’s economy to evaluate and describe the larger transformative actions that will be needed to meet the State’s more expansive emission reduction needs by 2050.”³⁷ Those six areas were: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identified key recommended actions for each sector that would facilitate achievement of the 2050 reduction target.

Based on CARB’s research efforts, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050.”³⁸ Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

³² CARB, *Supplement to the AB 32 Scoping Plan FED*, Table 1.2-2.

³³ *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO₂e under 2020 BAU and a required reduction of 169 million metric tons CO₂e (28.4 percent).*

³⁴ *Health & Safety Code §38561(h) requires CARB to update the Scoping Plan every five years.*

³⁵ CARB, *2014 Update*, May 2014, p. 4.

³⁶ CARB, *2014 Update*, May 2014, p. 34.

³⁷ CARB, *2014 Update*, May 2014, p. 6.

³⁸ CARB, *2014 Update*, May 2014, p. 32.

The First Update discussed new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expressed CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In January 2018, CARB adopted the *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target (2017 Update)*. The 2017 Update builds upon the framework established by the *2008 Climate Change Scoping Plan* and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources.³⁹ Implementation of mobile source strategies (cleaner technology and fuels) include the following:⁴⁰

- At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.
- At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.
- Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.
- Medium- and heavy-duty GHG Phase 2.
- Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_x standard.
- Last Mile Delivery: New regulation that would result in the use of low NO_x or cleaner engines and the deployment of increasing numbers of zero-emission

³⁹ CARB, *2017 Update, November 2017, p. 7.*

⁴⁰ CARB, *2017 Update, November 2017, p. 25.*

trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.

- Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.”

(d) Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32, which prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website, the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the State’s programs, policies, and investments related to climate change.

(e) Cap-and-Trade Program

The *2008 Climate Change Scoping Plan* identifies a Cap-and-Trade Program as one of the strategies for California to reduce GHG emissions. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a Cap-and-Trade Program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020.⁴¹ CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 and the State Legislature extended the Cap-and-Trade Program through 2030 with the adoption of Assembly Bill 398.

The Cap-and-Trade Program is designed to reduce GHG emissions from major sources, such as refineries and power plants (deemed “covered entities”). “Covered entities” subject to the Cap-and-Trade Program are sources that emit more than 25,000 metric tons CO₂e (MTCO₂e) per year. Triggering of the 25,000 MTCO₂e per year “inclusion threshold” is measured against a subset of emissions reported and verified under

⁴¹ *With continuation of the Cap-and-Trade Program, the State can achieve a 40-percent reduction target by 2030.*

the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender an allowance for each metric ton CO_{2e} of GHG they emit.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limits will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on a cumulative basis. As summarized by CARB in the First Update:

The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.

For example, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a commensurate reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its GHG emissions reduction mandates:

The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the “capped sectors.” Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency

standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.⁴² [...]

[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.⁴³

Overall, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state's emissions forecasts and the effectiveness of direct regulatory measures.

As of January 1, 2015, the Cap-and-Trade Program covers approximately 85 percent of California's GHG emissions.⁴⁴

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Cap-and-Trade Program's first compliance period.⁴⁵ Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program.

⁴² CARB, 2014 Update, May 2014, p. 88.

⁴³ CARB, 2014 Update, May 2014, pp. 86–87.

⁴⁴ Center for Climate and Energy Solutions, California Cap-and-Trade, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed July 28, 2020.

⁴⁵ While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015.

Assembly Bill 398 (AB 398) was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

(f) Energy-Related Sources

(i) California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) program (2002, SB 1078) required that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20-percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, California Governor Jerry Brown signed into law Senate Bill 2X (SB 2X), which modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.

In 2019, LADWP indicated that 32 percent of its electricity came from renewable resources in Year 2018.⁴⁶ Therefore, under SB 2X, LADWP is required to increase its electricity from renewable resources by an additional one percent to comply with the RPS of 33 percent by 2020.

(ii) Senate Bill 350

Senate Bill (SB) 350, enacted on October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.⁴⁷

(iii) Senate Bill 100

Senate Bill (SB) 100, enacted on September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's RPS and SB 350, as discussed above, to the following: achieve 50-percent renewable resources target by December 31, 2026, and achieve a 60-percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100

⁴⁶ LADWP, 2018 Power Content Label (version: July 2019).

⁴⁷ Senate Bill 350 (2015–2016 Reg. Session) Stats 2015, ch. 547.

percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045.⁴⁸

(iv) Senate Bill 1368

Senate Bill (SB) 1368, enacted on September 29, 2006, is a companion bill to AB 32 that requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO₂ per MWh. Furthermore, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO₂ per MWh (see CEC Order No. 07-523-7).

(g) Mobile Sources

(i) Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve “the maximum feasible reduction of greenhouse gases” emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On September 24, 2009, CARB adopted amendments to these “Pavley” regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.⁴⁹ Although setting emission standards on automobiles is solely the responsibility of the USEPA, the federal CAA allows California to set state-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. A comparison between the AB 1493 standards and the Federal CAFE standards was completed by CARB and the analysis determined that California emission standards are 16 percent more stringent through the 2016 model year and 18 percent more

⁴⁸ *Senate Bill 100 (2017–2018 Reg. Session) Stats 2018, ch. 312.*

⁴⁹ *CARB, Clean Car Standards—Pavley, Assembly Bill 1493, www.arb.ca.gov/cc/ccms/ccms.htm, Accessed July 28, 2020.*

stringent for the 2020 model year.⁵⁰ CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45-percent GHG reduction in comparison to the 2009 model year.

In March of 2020, the USEPA and NHTSA issued the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE) which provides fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model year 2021 standards through model year 2026.⁵¹ These standards apply to both passenger cars and light trucks.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.⁵² The withdrawal of the waiver became effective on November 26, 2019. In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.⁵³ As of May 2021, a trial date has not been set for the lawsuit.

(ii) Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-1-07, the LCFS (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS were directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

The 2017 Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 Update has assumed that the LCFS would be extended to an 18-percent reduction in carbon intensity beyond 2020. On September 27, 2018, CARB approved a rulemaking package that amended the LCFS to relax the 2020 carbon intensity reduction from 10 percent to 7.5 percent and to require a carbon intensity reduction of 20 percent by 2030.

⁵⁰ CARB, "Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493," January 23, 2008.

⁵¹ Federal Register, *The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*.

⁵² 84 FR 51310

⁵³ United States District Court for the District Court of Columbia, *State of California vs. Chao*, Case 1:19-cv-02826, 2019.

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015–2025.⁵⁴ The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.⁵⁵ In March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.⁵⁶

(iv) Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) is required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures. Under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, the CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the previous reduction target of 13 percent for 2035.^{57,58}

⁵⁴ CARB, *California's Advanced Clean Cars Program*, www.arb.ca.gov/msprog/acc/acc.htm, accessed August 20, 2019.

⁵⁵ CARB, *California's Advanced Clean Cars Program*, www.arb.ca.gov/msprog/acc/acc.htm, accessed August 20, 2019.

⁵⁶ CARB, *News Release: CARB finds vehicle standards are achievable and cost-effective*, www.arb.ca.gov/newsrel/newsrelease.php?id=908, accessed August 20, 2019.

⁵⁷ CARB, *SB 375 Regional Greenhouse Gas Emissions Reduction Targets (2018)*.

⁵⁸ *As the CARB targets were adopted after SCAG's most recently adopted SCS, it is expected that the updated targets will be incorporated into SCAG's next SCS.*

(v) *Senate Bill 743*

Governor Brown signed Senate Bill (SB) 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”

(h) *Building Standards*

(i) *California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)*

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

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

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.⁵⁹ On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which will go into effect on January 1, 2020.⁶⁰ The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.⁶¹ The 2019 Title 24 Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. As described in the 2019 Title 24 Standards, the standards represent “challenging but achievable design and construction practices” that represent “a

⁵⁹ CEC, 2019 Building Energy Efficiency Standards.

⁶⁰ CEC, 2019 Building Energy Efficiency Standards.

⁶¹ CEC, 2019 Building Energy Efficiency Standards.

major step towards meeting the Zero Net Energy (ZNE) goal.”⁶² Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.^{63,64} Although the Project would not include single family residential uses, energy efficiency for multifamily residential uses would also be improved under 2019 Title 24 standards. Compliance with 2019 Title 24 is enforced through the building permit process and would result in a decrease in energy use in comparison to 2016 standards.

(iii) California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the 2019 CALGreen Code, became effective on January 1, 2020. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Most of the mandatory measure changes in the 2019 CALGreen Code relative to the previous 2016 CALGreen Code were related to definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicle chargers and Minimum Efficiency Reporting Value (MERV) ratings for air filtration systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification.⁶⁵ For nonresidential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been revised in its entirety.⁶⁶ Compliance with the 2019 CALGreen Code is enforced through the building permit process.

(i) Senate Bill 97 (SB 97)

On June 19, 2008, OPR released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project’s construction and operation;

⁶² CEC, 2019 Building Energy Efficiency Standards, p. IV.

⁶³ CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.

⁶⁴ While the Project would not include single family homes, new energy efficiency measures under 2019 Title 24 would also apply to multi-family residential uses such as those included in the Project.

⁶⁵ California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2020.

⁶⁶ California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5—Nonresidential Mandatory Measures, effective January 1, 2017.

determination of significance of the project's impact to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including, but not limited to, the effects associated with transportation and energy consumption. The Draft Guidelines Amendments for Greenhouse Gas Emissions ("Guidelines Amendments") were adopted on December 30, 2009, and address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.⁶⁷ The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.⁶⁸

On December 28, 2018, OPR adopted amendments to the CEQA Guidelines to clarify several points such as the cumulative nature of greenhouse gas emissions, modeling methodology, and significance evaluation. These amendments included provisions contained in the 2008 OPR technical advisory which focused on the cumulative nature of greenhouse gas emissions and the effects on climate change. The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas

⁶⁷ See 14 Cal. Code Regs. §§ 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).

⁶⁸ 14 Cal. Code Regs. § 15064.4(b).

emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."⁶⁹

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32. SB 97 applies retroactively to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

(3) Regional

(a) South Coast Air Quality Management District

The Southern California Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan, which is a regional blueprint for achieving air quality standards and healthful air. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.⁷⁰ Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for residential/

⁶⁹ Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.

⁷⁰ SCAQMD, Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.

commercial projects that emit greater than 3,000 MTCO₂e per year. Under this proposal, residential/commercial projects that emit fewer than 3,000 MTCO₂e per year would be assumed to have a less-than-significant impact on climate change. However, this proposed residential/commercial threshold was not formally adopted. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 MTCO₂e per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects).

(b) Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.^{71,72} The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the prior 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016–2040 RTP/SCS’s strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;⁷³
- Develop “Complete Communities”;
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

⁷¹ SCAG, 2016–2040 RTP/SCS.

⁷² SCAG, *Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination*, June 2016.

⁷³ *Complete language: “Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment.” A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.*

The 2016–2040 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close relationship will help the region make choices that sustain existing resources and expand efficiency, mobility, and accessibility for people across the region. In particular, the 2016–2040 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016–2040 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS) was approved on September 3, 2020. The vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers, transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips. To support shorter trips, people would have the choice of using neighborhood bike networks, car share or micro-mobility services like shared bicycles or scooters. For longer commutes, people would have expanded regional transit services and more employer incentives to carpool or vanpool. Other longer trips would be supported by on-demand services such as microtransit, carshare, and citywide partnerships with ride hailing services. For those that choose to drive, hotspots of congestion would be less difficult to navigate due to cordon pricing, and using an electric vehicle will be easier as a result of an expanded regional charging network.

The 2020–2045 RTP/SCS states that the SCAG region was home to about 18.8 million people in 2016 and currently includes approximately 6.0 million homes and 8.4 million jobs.⁷⁴ By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with nearly 1.6 million more homes and 1.6 million more jobs. Transit Priority Areas⁷⁵ (TPAs) will account for less than 1 percent of regional total land but are projected to accommodate 30 percent of future household growth between 2016 and 2045.⁷⁶ The 2020–2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s TPAs. TPAs are a cornerstone of

⁷⁴ *The 2020–2045 RTP/SCS population growth forecast methodology includes data for years 2010, 2010, 2016, and 2045.*

⁷⁵ *Defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a major transit stop (rail or bus rapid transit station) with 15-minute or less service frequency during peak commute hours*

⁷⁶ *SCAG, Final 2020–2045 RTP/SCS, Making Connections, p. 51, May 7, 2020.*

land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State’s GHG emission reduction goals.⁷⁷ Due to fuel economy and efficiency improvements, GHG emission rates of model year 2017 vehicles have decreased by 15 to 20 percent when compared to model year 2008 and earlier vehicles. However, for purposes of SB 375 emissions reduction targets, the fuel economy improvements have been largely excluded from the reduction calculation.⁷⁸ The SB 375 target focuses on the amount of vehicle travel per capita. The reductions generated by fuel economy improvements are already included as part of the State’s GHG emissions reduction program and are not double-counted in the SB 375 target calculation.⁷⁹

(4) Local

(a) City of Los Angeles Green New Deal / Sustainable City pLAN

In 2015, Mayor Eric Garcetti issued the Sustainable City pLAN, a mayoral directive that 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.

In 2019, the first four-year update to the 2015 Sustainable City pLAN was released. While not a plan intended solely to reduce GHG emissions, this updated document, known as L.A.’s Green New Deal, expands upon the City’s vision for a sustainable future and provides accelerated targets and new goals, including climate mitigation.⁸⁰ L.A.’s Green New Deal has established targets such as 100 percent renewable energy by 2045, installation of 10,000 publicly available EV chargers by 2022 and 28,000 by 2028, diversion of 100 percent of waste by 2050, and recycling 100 percent of wastewater by 2035.

⁷⁷ SCAG, *Final 2020–2045 RTP/SCS, Making Connections*, p. 5, May 7, 2020.

⁷⁸ CARB, *Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, June 2017, p. B-32.

⁷⁹ CARB, *SB 375 Regional Greenhouse Gas Emissions Reduction Targets, Staff Report*, p. 28.

⁸⁰ *City of Los Angeles, L.A.’s Green New Deal, Sustainable City pLAN*, 2019.

(b) City of Los Angeles Green Building Code

On December 11, 2019, the Los Angeles City Council approved Ordinance No. 186,488, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, by amending certain provisions of Article 9 to reflect local administrative changes and incorporating by reference portions of the 2019 CALGreen Code. Projects filed on or after January 1, 2020, must comply with the provisions of the Los Angeles Green Building Code. Measures included in the Los Angeles Green Building Code that would serve to reduce GHG emissions include requirements for water reduction and water conserving plumbing fixtures and fittings, requirements for bicycle parking spaces, and electric vehicle charging, among others.

(c) City of Los Angeles General Plan

The City does not have a General Plan Element specific to Global Warming and GHG emissions. However, the following five goals from the Air Quality Element of the City's General Plan would also serve to reduce GHG emissions:

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures, such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

(d) Traffic Study Policies and Procedures

In July 2019, the City of Los Angeles Department of Transportation (LADOT) issued the Transportation Assessment Guidelines (TAG) to create a review process that advances the City's vision of developing a safe, accessible, well-maintained, and well-connected

multimodal transportation network.⁸¹ The TAG supersedes the previous Transportation Impact Study Guidelines from December 2016 and conforms to the requirements of SB 743 which shifts the focus of transportation analysis from level of service to VMT. The TAG has been developed to identify land use development and transportation projects that may impact the transportation system; to ensure proposed land use development projects achieve site access design requirements and on-site circulation best practices; to define whether off-site improvements are needed; and to provide step-by-step guidance for assessing impacts and preparing Transportation Assessment Studies.

d. Existing Conditions

(1) Existing Statewide GHG Emissions

GHG emissions are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes 1.4 percent of global and 6.2 percent of national GHG emissions.⁸² California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California consist of CO₂ produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2018.⁸³ It includes estimates for CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. The GHG inventory for California for years 2012 through 2018 is presented in Table IV.C-3 on page IV.C-34.

⁸¹ While LADOT updated the TAG in July 2020, the 2019 and 2020 versions are similar, and the 2019 TAG was used as the basis of the Project's Transportation Assessment approved by LADOT.

⁸² CEC, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, CEC-600-2006-013, October 2006.

⁸³ A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.

**Table IV.C-3
California GHG Inventory
(million metric tons CO₂e)**

	2012	2013	2014	2015	2016	2017	2018
Transportation	161.35	161.24	162.56	166.19	169.76	171.02	169.50
<i>On Road</i>	147.71	147.15	147.85	151.20	155.16	156.41	154.45
Passenger Vehicles	111.77	111.52	112.20	116.32	119.02	119.95	119.45
Heavy Duty Trucks	35.94	35.62	35.65	34.88	36.14	36.45	35.00
<i>Ships & Commercial Boats</i>	3.60	3.86	3.95	3.89	3.72	3.82	3.74
<i>Aviation (Intrastate)</i>	3.75	3.93	3.90	4.22	4.44	4.68	4.65
<i>Rail</i>	2.47	2.40	2.63	2.42	2.17	1.83	2.22
<i>Off Road</i>	2.23	2.33	2.43	2.53	2.63	2.73	2.83
<i>Unspecified</i>	1.58	1.57	1.79	1.93	1.64	1.55	1.61
<i>Percent of Total Emissions</i>	36%	36%	37%	38%	40%	40%	40%
Electric Power	98.16	91.39	88.85	84.83	68.57	62.13	63.11
<i>In-State Generation</i>	53.75	51.41	52.05	50.88	42.20	38.18	38.54
Natural Gas	49.72	47.66	47.07	46.19	38.18	34.65	35.00
Other Fuels	3.11	2.88	4.11	3.57	2.61	2.66	2.71
Fugitive and Process Emissions	0.91	0.87	0.88	1.12	1.42	0.88	0.83
<i>Imported Electricity</i>	44.42	39.99	36.80	33.94	26.36	23.95	24.57
<i>Unspecified Imports</i>	17.40	11.83	13.45	11.22	9.69	8.85	11.57
<i>Specified Imports</i>	27.02	28.15	23.35	22.72	16.67	15.10	13.00
<i>Percent of Total Emissions</i>	22%	20%	20%	19%	16%	15%	15%
Commercial and Residential	43.50	44.18	38.23	38.84	40.61	41.27	41.37
<i>Residential Fuel Use</i>	28.18	28.99	23.80	24.22	25.25	25.99	25.74
Natural Gas	25.76	26.53	21.58	21.90	22.80	23.62	23.23
Other Fuels	1.55	1.59	1.34	1.43	1.56	1.48	1.62
Fugitive Emissions	0.87	0.88	0.88	0.89	0.89	0.89	0.90
<i>Commercial Fuel Use</i>	13.40	13.29	12.49	12.69	13.14	12.99	13.46
Natural Gas	11.25	11.28	10.40	10.50	10.90	11.06	11.13
Other Fuels	2.15	2.00	2.09	2.18	2.24	1.93	2.32
<i>Commercial Cogeneration Heat Output</i>	0.54	0.50	0.52	0.52	0.78	0.85	0.72
<i>Other Commercial and Residential</i>	1.38	1.40	1.41	1.42	1.43	1.44	1.45
<i>Percent of Total Emissions</i>	10%	10%	9%	9%	9%	10%	10%
Industrial	88.88	91.61	92.44	90.15	88.91	88.73	89.18
<i>Refineries</i>	29.84	29.43	29.78	28.35	29.78	30.05	30.07
<i>General Fuel Use</i>	18.98	19.47	19.91	19.41	19.24	18.79	18.57
Natural Gas	14.48	14.37	15.38	14.63	15.42	15.01	15.49
Other Fuels	4.49	5.10	4.53	4.78	3.82	3.78	3.07
<i>Oil & Gas Extraction^a</i>	16.76	18.92	19.20	19.27	16.75	16.87	16.68
Fuel Use	14.87	16.94	17.17	17.22	14.84	14.94	14.61
Fugitive Emissions	1.89	1.98	2.03	2.05	1.91	1.93	2.08

Table IV.C-3 (Continued)
California GHG Inventory
(million metric tons CO₂e)

	2012	2013	2014	2015	2016	2017	2018
<i>Cement Plants</i>	6.93	7.21	7.66	7.47	7.60	7.66	7.88
Clinker Production	4.22	4.47	4.78	4.69	4.67	4.85	4.96
Fuel Use	2.70	2.74	2.88	2.77	2.93	2.81	2.91
<i>Cogeneration Heat Output</i>	8.96	9.01	8.25	7.98	7.84	7.59	8.10
<i>Other Process Emissions</i>	7.42	7.58	7.63	7.67	7.69	7.77	7.88
<i>Percent of Total Emissions</i>	20%	20%	21%	20%	21%	21%	21%
Recycling and Waste	8.65	8.69	8.76	8.83	8.90	8.99	9.09
<i>Landfills^b</i>	8.36	8.39	8.45	8.50	8.56	8.64	8.73
<i>Composting</i>	0.29	0.30	0.31	0.33	0.34	0.35	0.36
<i>Percent of Total Emissions</i>	2%	2%	2%	2%	2%	2%	2%
High Global Warming Potential	15.54	16.75	17.73	18.60	19.26	19.99	20.46
<i>Ozone Depleting Substance Substitutes</i>	15.25	16.38	17.42	18.32	19.00	19.64	20.15
<i>Electricity Grid SF6 Losses^c</i>	0.24	0.29	0.17	0.14	0.10	0.18	0.14
<i>Semiconductor Manufacturing^b</i>	0.06	0.08	0.14	0.14	0.16	0.17	0.17
<i>Percent of Total Emissions</i>	3%	4%	4%	4%	4%	5%	5%
Agriculture^d	35.46	33.76	34.80	33.33	33.16	32.32	32.57
<i>Livestock</i>	23.89	22.92	23.24	22.66	22.57	22.88	22.82
Enteric Fermentation (Digestive Process)	11.52	11.22	11.28	10.95	10.93	11.14	11.13
Manure Management	12.38	11.71	11.96	11.70	11.64	11.74	11.69
<i>Crop Growing & Harvesting</i>	7.70	7.13	7.04	6.28	6.62	6.33	6.52
Fertilizers	5.94	5.52	5.45	4.93	5.04	5.02	5.08
Soil Preparation and Disturbances	1.68	1.52	1.51	1.27	1.50	1.22	1.35
Crop Residue Burning	0.08	0.08	0.08	0.08	0.08	0.09	0.10
<i>General Fuel Use</i>	3.88	3.71	4.51	4.40	3.97	3.11	3.23
Diesel	2.47	2.53	3.39	3.66	3.21	2.40	2.48
Natural Gas	0.70	0.69	0.63	0.64	0.72	0.67	0.74
Gasoline	0.71	0.49	0.49	0.10	0.04	0.05	0.01
Other Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Percent of Total Emissions</i>	8%	8%	8%	8%	8%	8%	8%
<i>Natural Gas Transmission and Distribution</i>	3.88	3.82	3.87	3.94	3.99	4.01	4.00
<i>Manufacturing</i>	0.18	0.19	0.17	0.18	0.10	0.11	0.12
<i>Wastewater Treatment</i>	1.85	1.85	1.86	1.85	1.85	1.86	1.95
<i>Other</i>	1.51	1.72	1.73	1.69	1.75	1.78	1.81
Total Net Emissions	451.6	447.6	443.4	440.8	429.2	424.5	425.3
<p>^a Reflects emissions from combustion of fuels plus fugitive emissions.</p> <p>^b These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.</p>							

**Table IV.C-3 (Continued)
California GHG Inventory
(million metric tons CO₂e)**

	2012	2013	2014	2015	2016	2017	2018
^c This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors. ^d Reflects use of updated USEPA models for determining emissions from livestock and fertilizers. Source: California GHG Inventory for 2000–2018—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of CO ₂ e—(based upon IPCC Second Assessment Report's Global Warming Potentials).							

As shown in Table IV.C-3 on page IV.C-34, the GHG inventory for California in 2017 was 424.10 million MTCO₂e. Based on data presented above, the 2016 statewide GHG inventory fell below 1990 levels, consistent with the goals of AB 32.⁸⁴

(2) Existing Project Site Emissions

The Project Site is currently developed with a low-rise four level parking structure and a surface parking lot that is entirely paved and devoid of landscaping. This parking structure and surface parking lot currently provide 324 parking spaces, which are used for commercial parking by businesses in the area.

Area source emissions are generated by the use of maintenance equipment, landscape equipment, and products that contain solvents. Energy source emissions are typically associated with building natural gas usage. As the Project Site is currently used for parking, energy source emissions are minimal. Additionally, the parking use in the southern portion of the Project Site does not directly generate vehicle trips, so mobile source emissions are likewise minimal. To provide a conservative analysis of the Project, existing source emissions are considered to be *de minimis*.

3. Project Impacts

a. Thresholds of Significance

(1) State CEQA Guidelines Appendix G

In accordance with Appendix G of the State CEQA Guidelines (CEQA Guidelines), the Project would have a significant impact related to GHG emissions if it would:

⁸⁴ California Air Resources Board, Press Release, ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time, accessed July 28, 2020.

Threshold (a): Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;

Threshold (b): Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).⁸⁵ As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact less than significant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project.⁸⁶ To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.⁸⁷ Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the

⁸⁵ See, generally, Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.

⁸⁶ 14 CCR § 15064(h)(3).

⁸⁷ 14 CCR § 15064(h)(3).

reduction of greenhouse gas emissions.”⁸⁸ Therefore, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of a less than significant impact for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.⁸⁹

The City has not adopted a numeric threshold for the analysis of GHG impacts. As noted above, CEQA Guidelines Section 15064.4(b)(2) allows the City to determine a threshold of significance that applies to the Project, and accordingly the threshold of significance applied here is whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the applicable adopted regulatory plan to reduce GHG emissions is SCAG’s 2020–2045 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State’s long-term climate goals. This analysis also considers qualitative consistency with regulations or requirements adopted by AB 32’s *2008 Climate Change Scoping Plan* and subsequent updates, SCAG’s 2020-2045 RTP/SCS and the City of Los Angeles’ Green New Deal.

(2) SCAQMD Thresholds

As discussed above, the SCAQMD has an interim GHG significance threshold of 10,000 MTCO_{2e} per year for stationary source/industrial projects where the SCAQMD is the lead agency. This SCAQMD interim GHG significance threshold is not applicable to the Project as the Project is a mixed-use development, primarily residential with up to 7,499 square feet of commercial uses, and the City is the Lead Agency.

⁸⁸ 14 CCR § 15064(h)(3).

⁸⁹ See, for example, *San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance for Projects Subject to ARB’s GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014)*, in which the SJVAPCD “determined that GHG emissions increases that are covered under ARB’s Cap-and-Trade regulation cannot constitute significant increases under CEQA...” Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 MTCO_{2e}/yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, *Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014)*; SCAQMD, *Final Negative Declaration for Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014)*; *Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014)*; and *Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014)*.

(3) 2006 L.A. CEQA Thresholds Guide

The L.A. CEQA Thresholds Guide does not identify any criteria to evaluate GHG emissions impacts. Thus, the potential for the Project to result in impacts from GHG emissions is based on the CEQA Guidelines Appendix G thresholds. To answer both of those threshold questions, the City considered whether the Project is consistent with the following plans:

- AB 32's 2008 Scoping Plan and Subsequent Updates;
- SCAG's 2020–2045 RTP/SCS consistent with SB 375; and
- City of Los Angeles' Green New Deal.

As discussed above, OPR has noted that lead agencies “should make a good-faith effort to calculate or estimate GHG emissions” from a project.⁹⁰ GHG emissions are quantified below, consistent with OPR guidelines.

b. Methodology

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, this section recommends certain factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they

⁹⁰ OPR Technical Advisory, p. 5.

should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).⁹¹

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Nor have SCAQMD, OPR, CARB, CAPCOA, or any other State or regional agency adopted a numerical significance threshold for assessing GHG emission that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the analysis focuses on a project's consistency with statewide, regional and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. The evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG emissions-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

(1) Consistency with Plans

The Project's GHG impacts were evaluated by assessing the Project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies. As discussed previously, the Project is evaluated for consistency with AB 32's 2008 Climate Change Scoping Plan and subsequent updates, SCAG's 2020–2045 RTP/SCS, and the City's Green New Deal.

The OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. On a statewide level, the 2008 Climate Change Scoping Plan and subsequent updates provide measures to achieve AB 32 and SB 32 targets. On a regional level, SCAG's 2020–2045

⁹¹ See generally *California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009)*, pp. 11–13, 14, 16; see also *Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009*.

RTP/SCS contains measures to achieve VMT reductions required under SB 375. The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan as recommended in the relevant amendments to the CEQA Guidelines. The City's Green New Deal, although a mayoral initiative and not an adopted plan, includes short-term and long-term aspirations pertaining to climate change and this analysis addresses consistency with these strategies and goals. Thus, if the Project is designed in accordance with these plans, policies, regulations, and requirements the Project would result in a less than significant impact, because it would be consistent with the overarching State, regional and local plans for GHG reduction (AB 32).

A consistency analysis is provided and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of AB 32's *2008 Climate Change Scoping Plan* and subsequent updates, SCAG's 2020–2045 RTP/SCS, and the City's Green New Deal.

(2) Quantification of Emissions

In view of the above considerations, the City has determined to quantify the Project's total annual GHG emissions, taking into account the GHG emission reduction measures that would be incorporated into the Project's design. However, given the lack of a formally adopted numerical significance threshold or a formally adopted local plan for reducing GHG emissions applicable to this Project, the City has determined to assess the significance of the Project's GHG emissions by comparing the Project's consistency with regulatory schemes, comparable to formally adopted local GHG emission reduction plans, that are designed to reduce GHG emissions by encouraging development located and designed to result in the efficient use of resources.

This EIR quantifies the Project's annual GHG emissions and compares them to a Project without Reduction Features scenario, as defined by CARB's most updated projections for AB/SB 32.⁹²

This comparison is being done for informational purposes only, including in order to disclose the relative carbon efficiency of the Project. The Project without Reduction Features scenario does not account for energy efficiency measures beyond Title 24 Building Standards Code or measures to reduce natural gas usage⁹³ The City is focusing

⁹² *The comparison to a BAU scenario is not used as a threshold of significance, but is used to provide information and a quantitative metric to measure the Project's GHG emissions and level of reductions from Project Design Features and characteristics.*

⁹³ *Energy efficiency measures beyond Title 24 requirements include use of LED lighting and fenestration designed for solar orientation. Additional details are provided in Project Design Feature GHG-PDF-1.*

its determination of the significance of the Project's GHG emissions in relation to the Project's location and design and its consistency with plans and policies adopted to reduce GHG emissions, as explained below. However, the Project without Reduction Features does take into account certain regulatory measures included in the 2008 Climate Change Scoping Plan and subsequent updates, the 2020–2045 RTP/SCS, and the Sustainable City pLAn/LA Green New Deal.⁹⁴

(3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.⁹⁵ The General Reporting Protocol is based on the “Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard” developed by the World Business Council for Sustainable Development and the World Resources Institute through “a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions.”⁹⁶ Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the Project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements. A detailed discussion of the GHG methodology is included in Appendix B of this Draft EIR.

The General Reporting Protocol and the USEPA recommend the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions.⁹⁷ They include the following:

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam or permitted sources (e.g., power plants).

⁹⁴ *The CalEEMod model does not account for all regulatory measures in the 2008 Climate Change Scoping Plan and subsequent updates. However, the analysis does take into account reductions due to Pavley I and LCFS as discussed in further detail below.*

⁹⁵ *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

⁹⁶ *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

⁹⁷ *USEPA, Greenhouse Gases at EPA, www.epa.gov/greeningepa/greenhouse-gases-epa, accessed July 28, 2020.*

- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).⁹⁸

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.⁹⁹ For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies “should make a good-faith effort, based on available information, to calculate, model, or estimate... GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.”¹⁰⁰ Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions, rather than causing “new” GHG emissions. As a result, there is frequently an inability to conclude whether a project’s GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. The analysis of the Project’s GHG emissions is particularly conservative in that it assumes all of the GHG emissions are new additions to the atmosphere.

The California Emissions Estimator Model[®] (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria

⁹⁸ *Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.*

⁹⁹ *CARB, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.*

¹⁰⁰ *OPR Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, June 2008, p. 5.*

pollutant and GHG emissions associated with both construction and operations from a variety of land use projects.¹⁰¹ CalEEMod was developed in collaboration with the air districts of California, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

(4) Construction

The Project's construction emissions were calculated using CalEEMod Version 2016.3.2. Details of the modeling assumptions and emission factors are provided in Appendix B of this Draft EIR. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecast based on the construction assumptions included in Appendix B and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod.

The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove existing parking structure and surface parking lot, grade and excavate the Project Site, construct the proposed buildings and related public and private improvements, and plant new landscaping within the Project Site.

In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, the SCAQMD recommended that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.¹⁰² Thus, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

¹⁰¹ SCAQMD, *CEQA Air Quality Modeling*, www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling, accessed October 23, 2020.

¹⁰² SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, 2008.

(5) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential GHG emissions generated by new land uses on the Project Site, including area sources, electricity, natural gas, mobile sources, stationary sources (i.e., emergency generators), solid waste generation and disposal, and water usage/wastewater generation. CalEEMod default values for generation/usage rates, GHG emission factors, and GWP values were used in the evaluation of operational GHG emissions from the Project.

Area source emissions include landscaping, natural gas combustion (HVAC and water heaters), and architectural coating activities, the emissions are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Emissions of GHGs associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections for year 2025 (616 lbs. CO₂ per MWh). LADWP's carbon intensity projections also take into account SB 100 and SB 350 RPS requirements for renewable energy.

As with electricity, the emissions of GHGs associated with natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted.

Mobile source GHG emissions are calculated based on emission factors and an estimate of the Project's annual VMT, which was provided in the Project's Transportation Assessment.¹⁰³ As discussed in Section IV.G, Transportation, of this Draft EIR, the Project VMT was derived from the LADOT VMT Calculator. The VMT Calculator was developed by the City and LADOT to comply with SB 743 which requires lead agencies to adopt VMT criteria to determine transportation related impacts. The LADOT-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new resident, employee and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

¹⁰³ *The Mobility Group, 8th, Grand and Hope Transportation Assessment, December 2020.*

Stationary source GHG emissions are based on proposed stationary sources (i.e., emergency generators) that would be provided on the Project Site.

The emissions of GHGs associated with solid waste disposal are based on the Project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition as provided by CalEEMod, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the proposed land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution, electrical intensity factors for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod uses electricity intensity factors obtained from the 2006 CEC report, "Refining Estimates of Water-Related Energy Use in California" which represent the amount of electricity needed to transport and treat water. Water usage factors are obtained from surveys conducted throughout California for various land uses. Project water consumption GHG emissions are then quantified based on electricity usage and carbon intensity factors specific to electricity providers described above.

The GHG emissions calculations for the Project include credits or reductions for consistency with applicable project design features set forth in this Draft EIR. The analysis of Project GHG emissions with project design features at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., 2019 Title 24 Standards, Pavley I Standards, full implementation of California's Statewide RPS beyond current levels of renewable energy, and the California LCFS).¹⁰⁴ It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. The CalEEMod model incorporates 2014 emission factors which do not take into account the most recent 2017 LCFS updates. As a conservative assumption, GHG emissions reductions resulting from the LCFS updates were not included in the Project's emissions inventory. In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of project-generated trips as a result of project features (e.g., close proximity to transit) would provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not already in place, but are anticipated to be enforced by Project buildout (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, emissions reductions regarding cap-and-trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis

¹⁰⁴ *Actions and mandates are based on relevant year targets established by AB 32 and the current CARB Scoping Plan Update.*

takes a conservative approach that likely overestimates the Project's GHG emissions at buildout because the State is expected to continue to implement a number of policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the State's long-term climate goals.

c. Project Design Features

The following project design features are applicable to the Project with regard to GHG emissions:

Project Design Feature GHG-PDF-1: The design of the new buildings shall incorporate features of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program to be capable of meeting the standards of LEED Certified or equivalent green building standards. The design of the new buildings will incorporate the following sustainability features:

- a. Use of Energy Star-labeled products and appliances.
- b. Use of light-emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.
- c. Water-efficient plantings with drought-tolerant species;
- d. Fenestration designed for solar orientation; and
- e. Pedestrian- and bicycle-friendly design with short-term and long-term bicycle parking.

As part of the Project, the Applicant would incorporate project features to support and promote environmental sustainability by complying with all applicable State and local regulatory requirements, including the provisions set forth in the City's Green Building Ordinance. As an example, the Project would comply with the City's EV charging requirements which specifies that 10 percent of new parking spaces would require EV charging equipment. In addition, 30 percent of all new parking spaces would be required to be EV "ready" which will be capable of supporting future EV charging equipment.¹⁰⁵ The Project would also include water conservation and waste reduction measures as set forth by Project Design Feature WAT-PDF-1 in Section IV.I.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR. Furthermore, as described in Section IV.A, Air Quality, of this Draft EIR, Project Design Feature AIR-PDF-2 is designed to reduce

¹⁰⁵ *City of Los Angeles Ordinance No. 186485. December 11, 2019.*

criteria pollutant emissions associated with natural gas-fueled fireplaces and would also reduce GHG emissions.

d. Analysis of Project Impacts

Threshold (a): Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Threshold (b): Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG.

(1) Impact Analysis

(a) Consistency with Applicable Plans and Policies

As discussed above under Subsection 3.a(1) on page IV.C-36, compliance with applicable GHG emissions reduction plans would result in a less-than-significant Project and cumulative impact. The following section describes the extent to which the Project complies with or exceeds the performance-based standards included in the regulations outlined in the AB 32's 2008 Climate Change Scoping Plan and subsequent updates, SCAG's 2020–2045 RTP/SCS, and the City's Green New Deal. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

(i) Climate Change Scoping Plan

The 2008 Climate Change Scoping Plan and subsequent updates have a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. CARB also recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions.¹⁰⁶ The following discussion demonstrates how the pertinent reduction actions in the 2008 Climate Change Scoping Plan and subsequent updates in 2013 and 2017 relate to and reduce Project-related GHG emissions.

Provided in Table IV.C-4 on page IV.C-49 is an evaluation of applicable mandatory regulatory compliance reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and subsequent updates that through implementation would serve to reduce

¹⁰⁶ CARB, 2008 Climate Change Scoping Plan.

**Table IV.C-4
Mandatory Regulatory Compliance Measures within the 2008 Climate Change Scoping Plan and Subsequent Updates**

Mandatory Regulatory Compliance Measures
<p>Area</p>
<p>SCAQMD Rule 445 (Wood Burning Devices): As required under this rule, the Project would not include any wood burning cooking stoves or fire places. Furthermore, AIR-PDF-2 requires the Project to not include natural gas-fueled fireplaces in the proposed residential units. This reduction in GHG emissions was calculated within CalEEMod modeling.</p>
<p>Energy</p>
<p>RPS Program and SB 2X: The California RPS program (Updated under SB 2X) requires both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 350 further requires 50 percent renewables by 2030.^a In 2019, LADWP indicated that 32 percent of its electricity came from renewable resources in Year 2018.^b Electricity GHG emissions provided in Table IV.C-9 on page IV.C-72 assume that LADWP will receive at least 33 percent of its electricity from renewable sources by the year 2020 and 50 percent by the year 2030 (with a straight line interpolation for the Project buildout year of 2025) consistent with SB 350. The CalEEMod default carbon intensity for electricity generated by LADWP (pounds of CO_{2e} per MWh) is based on a year 2007 renewables portfolio of 8 percent and was therefore updated within CalEEMod to reflect the year 2025 renewables portfolio. Please note that under recently passed SB 100, LADWP is required to generate electricity that would increase renewable energy resources to 50 percent by 2026 and, 60 percent by 2030, and 100 percent by 2045. The Project complies with these percentage renewable requirements inasmuch as the Project is served by LADWP, which is committed to achieving the increase in renewable energy resources by the required dates.</p> <p>The electricity-related GHG emissions provided in Table IV.C-9 on page IV.C-72 conservatively do not account for the additional 12-percent reduction that would be achieved by LADWP in year 2025 prior to buildout of the Project (difference between the 38 percent renewables assumed for the buildout year of 2025 and 50 percent required under SB 100 in year 2026) or 22-percent reduction achieved by LADWP in year 2030 (difference between the 38 percent renewables assumed for the buildout year of 2025 and 60 percent required under SB 100 in year 2030). Given LADWP’s progress towards meeting and exceeding the established targets, as well as penalties for non-compliance, it is assumed LADWP will comply.</p> <p>SB 350: As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this regulation since Project Design Feature GHG-PDF-1, would require the Project to implement measures to reduce overall energy usage compared to baseline conditions.</p>
<p>Cap-and-Trade Program: As required by AB 32 and the <i>Climate Change Scoping Plan</i>, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project’s electricity usage per year presented in Table IV.C-9 on page IV.C-72 would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. While not quantified in this analysis, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project’s electricity and fuel usage would indirectly be covered by the Cap-and-Trade Program.</p>
<p>Mobile</p>
<p>Advanced Clean Cars Program: CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025 and increasing the number of</p>

Table IV.C-4 (Continued)
Mandatory Regulatory Compliance Measures within the 2008 Climate Change Scoping Plan and Subsequent Updates

Mandatory Regulatory Compliance Measures

zero emission vehicles manufactured in the 2018 through 2025 model years. Standards under the Advanced Clean Cars Program apply to cars and light duty trucks within California and used by residents, employees, and deliveries to and from the Project. Mobile source GHG emissions provided in Table IV.C-9 on page IV.C-72 conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model default fleet mix for the Air Basin does not yet account for this regulation. The Project would further support this regulation since the Applicant will provide at least 30 percent of the total parking spaces provided to be capable of supporting future EVSE as dictated.

The Scoping Plan recommends additional mobile source strategies through the extension of the Advanced Clean Cars Program which are expected to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.^{c,d} Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Project would also indirectly benefit from these measures once adopted. However, the Project's GHG emissions inventory conservatively does not account for GHG emissions reductions due to these measures.

Low Carbon Fuel Standard (LCFS): The current LCFS requires a reduction of at least 10 percent in the carbon intensity (CI) of California's transportation fuels by 2020. CalEEMod includes implementation of LCFS into the calculation of GHG emissions from mobile sources. However, the LCFS was amended in September 2018 to target a 20-percent reduction in CI from a 2010 baseline by 2030.^e As discussed previously, the CalEEMod model does not take into account the more recent updates to LCFS. The Project's emissions inventory conservatively does not take credit for additional GHG reductions due to the more recent LCFS requirements, but this additional 10-percent reduction in CI would indirectly reduce the Project's mobile source emissions.

^a SB 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.

^b CEC, Annual Power Content Labels for 2017, LADWP, July 2018.

^c CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm, accessed July 28, 2020.

^d CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks, accessed July 28, 2020.

^e CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm, accessed July 28, 2020.

^f California Integrated Waste Management Act of 1989 and AB 341.

^g AB 341 (2011).

Source: Eyestone Environmental, 2020.

the Project's GHG emissions.¹⁰⁷ Further evaluation of project design features and specific applicable policies and measures in the 2008 Climate Change Scoping Plan and subsequent updates is provided in Table IV.C-5 on page IV.C-52. As detailed therein, the Project would not conflict with the 2008 Climate Change Scoping Plan and subsequent updates, which is intended to reduce GHG emissions.

Certain elements of these regulations must be complied with by all projects that develop urban land uses (e.g., commercial, residential, industrial, etc.). This category of regulations can be grouped in terms of the GHG sector that benefit from their implementation. With regard to the energy sector, implementation of the California Renewables Portfolio Standard (RPS) program (SB 2X), SB 350, and the Energy Independence and Security Act of 2007 (EISA) would reduce GHG emissions generated by energy consumption. With regard to the mobile sector, implementation of the Advanced Clean Cars Program, Low Carbon Fuel Standard (LCFS), and SB 375 would reduce GHG emissions generated by motor vehicle travel. In addition, ongoing implementation of the Cap-and-Trade Program would reduce GHG emissions from both energy consumption and the fuels used for motor vehicle travel. With regard to the solid waste sector, implementation of the California Integrated Waste Management Act of 1989 and AB 341 would reduce GHG emissions generated by solid waste disposal in terms of reduced vehicle trips associated with the transport of solid waste materials as well as landfill emissions. Lastly, with regard to the water sector, implementation of SB X7-7 would reduce GHG emissions associated with the energy used by the infrastructure required for the conveyance of water. Further, Proposed Project development would occur in accordance with these regulations and, therefore, would comply with their requirements and would not conflict with the implementation of these regulations.

As such, based on the analysis above and below, the Project would not conflict with the GHG reduction-related actions and strategies in the 2008 Climate Change Scoping Plan and subsequent updates, and related impacts would be less than significant.

¹⁰⁷ *An evaluation of reduction actions/strategies applicable to stationary sources is not necessary, as the Project's only potential stationary sources emissions will be created by emergency generators which would only be used in an emergency.*

**Table IV.C-5
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>California Code of Regulations (CCR), Title 20: The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. Presented in the 2008 Scoping Plan. Measure E-1 and CR-1.</p>	<p>State and CEC</p>	<p>No Conflict. These standards are included in default parameters provided in Table IV.C-9 on page IV.C-72.</p>
<p>CCR, Title 24, Building Standards Code: The 2019 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.^a</p> <p>The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants. Presented in the 2017 Update to the Scoping Plan, Appendix H.</p>	<p>State and CEC</p>	<p>No Conflict. Consistent with regulatory requirements, the Project shall comply with applicable provisions of the 2020 Los Angeles Green Building Code that in turn require compliance with mandatory standards included in the CALGreen Code. The 2019 Title 24 standards are substantially more efficient than the 2016 Title standards. The 2016 standards are included in default parameters provided in CalEEMod. Therefore, a conservative 10 percent reduction was applied to the default CalEEMod parameters to account for the more stringent 2019 Title 24 standards and are reflected in Project-related GHG emissions provided in Table IV.C-9 on page IV.C-72.</p>
<p>Senate Bill (SB) 375: SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. Presented in the 2017 Update to the Scoping Plan, Appendix H3.</p>	<p>State, CARB Regional, SCAG</p>	<p>No Conflict. SB 375 requires SCAG to direct the development of the SCS for the region. The Project represents an infill development within an existing urbanized area that would concentrate new residential uses within an HQTAs, consistent with the overall growth pattern encouraged in the RTP/SCS. Therefore, the Project would be consistent with SB 375, the reduction in passenger vehicle GHG emissions per capita goals provided in the 2020–2045 RTP/SCS.</p>
<p>By 2019, adjust performance measures used to select and design transportation facilities.</p> <ul style="list-style-type: none"> Harmonize project performance with emissions reductions, 	<p>CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF,</p>	<p>No Conflict. The Project would not involve construction of transportation facilities. However, the Project Site is located approximately two blocks from the Los Angeles County Metropolitan Transportation Authority’s (Metro’s) 7th/Metro Center</p>

Table IV.C-5 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).</p> <ul style="list-style-type: none"> Presented in the 2017 Update to the Scoping Plan, Table 17. 	<p>CTC, Caltrans</p>	<p>Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is a hub of the regional rail network. The Project benefits from these bus stops by encouraging use of mass transit resulting in a reduction of Project-related vehicle trips to and from the Project Site.</p>
<p>By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts). Presented in the 2017 Update to the Scoping Plan, Table 17.</p>	<p>CalSTA, Caltrans, CTC, OPR/SGC, CARB</p>	<p>No Conflict. The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City regulatory requirements.</p>
<p>CCR, Title 24, Building Standards Code: The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction. Presented in the 2017 Update to the Scoping Plan, Appendix H3.</p>	<p>State</p>	<p>No Conflict. The Project would comply with applicable provisions of the 2020 Los Angeles Green Building Code which in turn requires compliance with mandatory standards included in the California Green Building Standards (20-percent overall water use reduction). Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen, 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code and reflect an approximately 20-percent reduction in water usage as compared to the base demand provided in CalEEMod. The Project’s reduction in water usage would also reduce energy and associated emissions required to pump and treat water.</p>
<p>Million Solar Roofs Program: The program is implemented through SB 1 (Murray, 2006), which provides up to \$3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs. Presented in the 2008 Climate Change Scoping Plan.</p>	<p>State</p>	<p>No Conflict. The Project would comply with Title 24 and Los Angeles Green Building Code which requires that rooftop areas on high-rise multi-family buildings and non-residential buildings to set aside a minimum area for potential installation of solar panels at a later date. Title 24 does allow for exceptions to this requirement and alternatives for meeting this requirement.¹⁰⁸ Actual requirements would be determined once the Project</p>

¹⁰⁸ California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Non-Residential Buildings, Section 110.10.

Table IV.C-5 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		undergoes the permitting process. Thus, the Project would be considered “solar-ready.” If solar panels are to be installed at a later date, the Project would be eligible for the financial incentives offered by this program.
<p>Senate Bill X7-7: The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment. Presented in the 2017 Update to the Scoping Plan, Appendix H.</p>	State	<p>No Conflict. As discussed above under Title 24, the Project would incorporate water conservation features that would contribute towards meeting this performance based standard. Project Design Feature WAT-PDF-1 in Section IV.I.1, Utilities and Service Systems---Water Supply and Infrastructure, of this Draft EIR, provides a specific list of water conservation measures. Examples include: high-efficiency toilets with flush volume of 1.1 gallons of water per flush or less, showerheads with a flow rate of 1.5 gallons per minute or less, and drip/subsurface irrigation, among others. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.</p>
<p>Implement the Short-Lived Climate Pollutant Strategy by 2030:</p> <ul style="list-style-type: none"> • 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels. • Presented in the 2017 Update to the Scoping Plan, Table 17. 	CARB, CalRecycle, CDFA, SWRCB, Local air districts	<p>No Conflict. Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.^b SB 1383 requires various agencies including CARB, California Department of Food and Agriculture (CDFA), the State Water Resources Board (SWRCB) to be responsible for adopting regulations to reduce GHG emissions. These regulations would be applicable to the Project. Therefore, the Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.</p>
<p>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383. Presented in the 2017 Update to the Scoping Plan, Table 17.</p>	CARB, CalRecycle, CDFA, SWRCB, Local air districts	<p>No Conflict. Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50-percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and</p>

Table IV.C-5 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		<p>75-percent reduction by 2025. In October 2019, CalRecycle has released a revised draft of SB 1383 regulations with the formal comment period ending October 18, 2019. Adoption of the regulations to achieve SB 1383 targets is expected in late 2020.^c</p> <p>The Project would not conflict with AB 341, which requires not less than 75 percent of commercially generated solid waste (including organic waste) generated be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383. This reduction in solid waste generation was not reflected in CalEEMod default assumptions (assumes zero percent diversion rate) and was conservatively not included in the calculation of Project GHG emissions.</p>
<hr/> <p><i>CalRecycle = California Department of Resources Recycling and Recovery</i> <i>CalSTA = California State Transportation Agency</i> <i>Caltrans = California Department of Transportation</i> <i>CARB = California Air Resources Board</i> <i>CDFA = California Department of Food and Agriculture</i> <i>CTC = California Transportation Commission</i> <i>DOF = California Department of Finance</i> <i>GoBiz = Governor’s Office of Business and Economic Development</i> <i>SCAG = Southern California Association of Governments</i> <i>SGC = Strategic Growth Council</i> <i>SWRCB = State Water Resources Control Board</i></p> <p>^a CEC, Adoption Hearing, 2019 Building Energy Efficiency Standards. ^b CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm. ^c CARB, Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, www.calrecycle.ca.gov/climate/slcp/.</p> <p>Source: Eyestone Environmental, 2020.</p>		

(ii) SCAG 2020–2045 RTP/SCS

As previously discussed, the purpose of SB 375 is to implement the State’s GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the 2020–2045 RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the 2020–2045 RTP/SCS identify various strategies to reduce per capita VMT. The 2020–2045 RTP/SCS are expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions for specified target years.

In addition to demonstrating the region’s ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outline a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the Project, strategies and policies set forth in the 2020–2045 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency.¹⁰⁹ These strategies and policies are addressed below.

Consistency with Integrated Growth Forecast

The 2020–2045 RTP/SCS provide socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG’s Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review.

According to SCAG’s 2020–2045 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2019 was approximately 4,020,438 persons.¹¹⁰ In 2025, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,193,714 persons.¹¹¹ The employment forecast for the City of Los Angeles Subregion in 2019 was

¹⁰⁹ SCAG, 2020-2048 RTP/SCS, September 3, 2020, p. 9.

¹¹⁰ Based on a linear interpolation of 2016–2045 data.

¹¹¹ Based on a linear interpolation of 2016–2045 data.

approximately 1,878,052 employees.¹¹² In 2025, the City of Los Angeles Subregion is anticipated to have approximately 1,937,555 employees.¹¹³

The Project proposes 580 dwelling units and up to 7,499 square feet of commercial/retail/restaurant uses. According to American Community Survey data, the estimated household size for the City of Los Angeles is 2.41 persons per multi-family unit.^{114,115} Applying this generation factor, the Project would generate up to 1,398 residents. Based on employee generation rates provided by the City of Los Angeles VMT Calculator Documentation, the Project would generate approximately 30 employees.¹¹⁶

Per the 2020–2045 RTP/SCS, the estimated 1,398 new residents generated by the Project would represent approximately 0.81 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2019 and 2025, and the Project’s estimated 30 employees would constitute approximately 0.05 percent of the employment growth forecasted between 2019 and 2025.

Accordingly, the Project’s generation of residents and employees would be consistent with the population and employment projections contained in the 2020–2045 RTP/SCS. Refer to Section IV.D, Land Use and Planning, of this Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS.

Consistency with VMT Reduction Strategies and Policies

As discussed above, the City is basing its determination of the significance of the Project’s GHG emissions solely in relation to the Project’s consistency with state, regional and local regulatory schemes and policies adopted to reduce GHG emissions. As shown in Appendix B of this Draft EIR, the Project design includes characteristics that would reduce trips and VMT as compared the Project without implementation of VMT reducing measures within the Air Basin as measured by CalEEMod. These relative reductions in vehicle trips

¹¹² Based on a linear interpolation of 2016–2045 data.

¹¹³ Based on a linear interpolation of 2016–2045 data.

¹¹⁴ Based on a rate of 2.41 persons per multi-family unit based on the 2018 American Community Survey 5-Year Average Estimates per correspondence with Jack Tsao, Data Analyst II, Los Angeles Department of City Planning, June 12, 2020.

¹¹⁵ As a note, the Initial Study for the 8th, Grand and Hope Project (Appendix A of this Draft EIR) applied an estimated rate of 2.43 persons per multi-family unit, which was the available rate provided by the City of Los Angeles at the time of publication of the Initial Study. This Draft EIR now utilizes the updated rate of 2.41 persons per multi-family unit provided by the City of Los Angeles.

¹¹⁶ Based on the City of Los Angeles VMT Calculator Documentation Guide, Table 1, May 2020, the employee generation rate 0.004 employee per square foot for “High-Turnover Sit-Down Restaurant” land use is applied to the 7,499 square feet.

and VMT from the Project without implementation of VMT reducing measures within the air basin help quantify the GHG emissions reductions achieved by locating the Project in an infill, HQTAs area that promotes alternative modes of transportation.

The Project would be designed and constructed to incorporate features to support and promote environmental sustainability. The Project represents an infill development within an existing urbanized area that would introduce a new residential use on the Project Site, within an HQTAs. The Project Site is transit accessible and is close to many bus transit lines, rail lines, and local shuttle service. Specifically, the Project Site is located approximately two blocks from the Los Angeles County Metropolitan Transportation Authority's (Metro's) 7th/Metro Center Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is considered a hub of the regional rail network. Metro bus lines, including local and rapid lines, as well as Los Angeles Department of Transportation's (LADOT's) Commuter Express lines, run south along Grand Avenue. Metro Lines, as well as LADOT's Commuter Express Lines and Antelope Valley Transit Authority's (AVTA) Commuter Line, run west on 8th Street. LADOT's DASH Lines have stops within one block north on 7th Street and within one block west on Flower Street. Also within two to three blocks of the Project Site are Silver Lines; Foothill Transit Lines; Santa Monica's Big Blue Bus; Torrance Transit; and Montebello Bus Lines. These bus lines connect passengers to the Project Site from various locations across the City and throughout Los Angeles County.

The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC. The provision of bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with external streets to encourage people to walk instead of drive.

As shown in Appendix B of the Draft EIR, the Project design includes characteristics in addition to the measures accounted for in the Traffic Study that would reduce trips and VMT as compared to the Project without implementation of VMT reducing-measures within the South Coast Air Basin (Air Basin) as measured by CalEEMod. Such measures include increased density, proximity to job centers and other retail uses, and accessibility to mass transit. These relative reductions in vehicle trips and VMT from the Project without implementation of VMT reducing measures within the Air Basin help quantify the GHG emissions reductions achieved by locating the Project in an infill, HQTAs area that promotes alternative modes of transportation.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites,

which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.¹¹⁷ The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites. As shown in Appendix B, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 61 percent reduction in overall VMT compared to the baseline ITE trip generation rates.

The Project would also be consistent with the following key GHG reduction strategies in SCAG's 2020–2045 RTP/SCS, which are based on changing the region's land use and travel patterns:

- Compact growth in areas accessible to transit;
- Jobs and housing closer to transit;
- New housing and job growth focused in HQTAs; and
- Biking and walking infrastructure to improve active transportation options and transit access.

As discussed previously, the Project would develop new residential and up to 7,499 square feet of commercial uses within a HQTA, which is defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.D, Land Use and Planning, of this Draft EIR for further details). The Project Site is located approximately two blocks from the Metro's 7th/Metro Center Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is considered a hub of the regional rail network. The Project's Study Area is currently served by a total of seven local and inter-city transit operators. Metro also operates four rail lines, six Rapid bus lines, three Express lines and 28 Local lines in the Project Area. Additional transit lines within the Study Area include nine LADOT Commuter Express lines, five LADOT Downtown Area Short Hop (DASH) bus lines, eight Foothill

¹¹⁷ *Environmental Protection Agency, Mixed-Use Trip Generation Model, www.epa.gov/smartgrowth/mixed-use-trip-generation-model, accessed April 6, 2020.*

Transit bus lines, two Orange County Transportation Authority bus lines, one Santa Monica Big Blue Bus line, and one Torrance Bus line. Bicycle parking and amenities provided by the Project would further encourage biking. These and other measures such as proximity to job centers and retail uses as well as increased density would further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of SCAG's 2020–2045 RTP/SCS.

Increased Use of Alternative Fueled Vehicles Policy Initiative

The second category of strategies and policies of the 2020–2045 RTP/SCS, with regard to individual development projects, such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2020–2045 RTP/SCS policy initiative focus on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would provide at least 30 percent of the total LAMC-required parking spaces provided to be capable of supporting future EVSE and at least 10 percent of the total LAMC-required parking spaces with EV charging stations as dictated by City requirements.

Energy Efficiency Strategies and Policies

The third category of strategies and policies of the 2020–2045 RTP/SCS for individual developments, such as the Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2020–2045 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed in Section II, Project Description, of the Draft EIR, the Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen. These standards would reduce energy and water usage and waste and, thereby, reduce associated greenhouse gas emissions and help minimize the impact on natural resources and infrastructure. The sustainability features to be incorporated into the Project would include, but not limited to WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; Energy Star-labeled appliances; and water-efficient landscape design. Some of these measures are consistent with the requirements of the Los Angeles Green Building code, while some exceed code requirements. In addition, Project Design Feature GHG-PDF-1 would require the design of the new buildings to incorporate features to achieve the sustainability intent of the Certified Rating under the LEED® green building program or equivalent green building standards. Furthermore, the Project would be subject to the 2019 Title 24 Standards.

Land Use Assumptions

At the regional level, the 2020–2045 RTP/SCS is a plan adopted for the purpose of reducing GHGs. In order to assess the Project’s consistency with the 2020–2045 RTP/SCS, this Draft EIR also analyzes the Project’s land use characteristics for consistency with those utilized by SCAG in its Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as the 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project’s consistency with the applicable goals and principles set forth in the 2020–2045 RTP/SCS is discussed in Section IV.D, Land Use and Planning, of the Draft EIR and detailed in Table 5 of Appendix D of the Draft EIR. As shown in Table IV.C-5 on page IV.C-52, the Project is consistent with the goals and principles set forth in the 2020–2045 RTP/SCS.

In sum, the Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State’s long-term climate policies.¹¹⁸ By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Overall, the Project would not conflict with the GHG reduction-related actions and strategies contained in the 2020–2045 RTP/SCS. As such, impacts related to consistency with the 2020–2045 RTP/SCS would be less than significant.

(iii) City of Los Angeles Sustainable City pLAN/City’s Green New Deal

As discussed above, the Sustainable City pLAN, a mayoral initiative, 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. The Sustainable City pLAN provides information as to what the City will do with buildings and infrastructure in their control, and provides specific targets related to housing and development, as well as mobility and transit, including the reduction of vehicle miles traveled per capita and increasing trips made by walking, biking or transit. The Sustainable City pLAN was updated in April 2019 and renamed as L.A.’s Green New Deal. L.A.’s Green New Deal’s specific targets include ensuring 57 percent of new housing units are built within 1,500 feet of transit by 2025 and 75 percent by 2035; reducing VMT per capita

¹¹⁸ As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.

by at least 13 percent by 2025, 39 percent by 2035, and 45 percent by 2050; increasing the percentage of all trips made by walking, biking, micro-mobility/matched rides or transit to at least 35 percent by 2025 and 50 percent by 2035 and has established targets such as 100 percent renewable energy by 2045, installation of 10,000 publicly available EV chargers by 2022 and 28,000 by 2028, diversion of 100 percent of waste by 2050, and recycling 100 percent of wastewater by 2035.¹¹⁹

Table IV.C-6 on page IV.C-63 provides a discussion of the Project's consistency with applicable GHG-reducing actions from the City of LA's Green New Deal. As discussed therein, the Project would not conflict with the applicable goals and actions of the City's Green New Deal.

Although the Sustainable City pLAN/L.A.'s Green New Deal is not directly applicable to private development projects, the Project would generally be consistent with these aspirations as it is an infill development consisting of residential and up to 7,499 square feet of commercial uses on a Project Site located two blocks from Metro's 7th/Metro Center Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is considered a hub of the regional rail network. Furthermore, the Project would comply with CALGreen, implement various project design features to reduce energy usage, including Project Design Features GHG-PDF-1, which would achieve the equivalent of LEED certification, and WAT-PDF-1, and would comply with the City of Los Angeles Solid Waste Management Policy Plan, the RENEW LA Plan, and the Exclusive Franchise System Ordinance (Ordinance No. 182,986) in furtherance of the aspirations included in the Sustainable City pLAN with regard to energy-efficient buildings and waste and landfills. The Project would also provide secure short- and long-term bicycle storage areas for Project residents and guests.

Overall, the Project would not conflict with the Sustainable City pLAN/City's Green New Deal. Therefore, impacts pertaining to consistency with the Sustainable City pLAN/City's Green New Deal would be less than significant.

(iv) Post-2030 Analysis

Studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to the statewide policy goal included in Executive Order B-30-15 of 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are

¹¹⁹ City of Los Angeles, L.A.'s Green New Deal, Sustainable City pLAN, 2019 Targets, https://plan.lamayor.org/targets/targets_plan.html, accessed October 20, 2020.

**Table IV.C-6
Consistency with Applicable GHG Emissions Goals and Actions of City's Green New Deal**

Action	Description	Consistency Analysis
Focus Area: Local Water		
Reduce potable water use per capita by 22.5% by 2025; and 25% by 2035; and maintain or reduce 2035 per capita water use through 2050	The City would build upon the success of Save the Drop program and develop additional water conservation campaigns. In addition, the City would continue to benchmark customer use and improve data gathering to identify effective programs	No Conflict. While this action primarily applies to the City and LADWP, the Project would incorporate water conservation features to reduce water use. Water usage rates were calculated consistent with the requirements under City Ordinance No. 184,248, the 2013 California Plumbing Code, 2016 California Green Building Code (CALGreen), 2014 Los Angeles Plumbing Code, and 2019 Los Angeles Green Building Code and reflects approximately a 20 percent reduction in water usage as compared to the CalEEMOD default base demand. Project-related GHG emissions from water related sources also include implementation of Project Design Feature WAT-PDF-1 included in Section IV.1.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.
Focus Area: Clean and Healthy Buildings		
All new buildings will be net zero carbon by 2030; and 100% of buildings will be net zero carbon by 2050	The City would perform a complete building electrification study and develop supporting programs. Financing would be expanded and improved to provide electrification existing energy efficiency and solar programs.	No Conflict. While this action primarily applies to the City, the Project would be designed and operated to meet or exceed the applicable requirements of the state Green Building Standards Code and the City of Los Angeles Green Building Code. Furthermore, the Project would be subject to the 2019 Title 24 Standards which represent “challenging but achievable design and construction practices” that represent “a major step towards meeting the Zero Net Energy (ZNE) goal. ^a
Reduce building energy use per sf for all building types 22% by 2025; 34% by 2035; and 44% by 2050	The City would increase awareness of incentives and smart building energy management systems. An energy consumption report will be prepared to assess the energy-water nexus.	No Conflict. While this action primarily applies to the City, the Project would be designed and operated to meet or exceed the applicable requirements of the state Green Building Standards Code and the City of Los Angeles Green Building Code.
Focus Area: Housing and Development		
Ensure 57% of new housing units are built within 1500 ft of transit by 2025; and 75% by 2035	The City would develop regulatory tools and strategies to encourage transit ridership and focus growth in housing near the North Hollywood Station, Van Nuys Station, Sepulveda Station, Reseda Station, and Sherman Way Station. New stations	No Conflict. While this action primarily applies to the City, the Project would concentrate 580 new residential units and up to 7,499 square feet of commercial uses in close proximity to public transit opportunities (e.g., light rail and bus routes). The Project Site is well served

Table IV.C-6 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of City’s Green New Deal

Action	Description	Consistency Analysis
	<p>would also be added to the Purple Line from Downtown L.A. to UCLA.</p> <p>This action reduces vehicle emissions by facilitating access to transit which can reduce single occupancy vehicle trips and help alleviate traffic congestion, and most importantly, reducing associated GHG emissions.</p>	<p>by public transit and only two blocks from Metro’s 7th/Metro Center Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is considered a hub of the regional rail network.</p>
Focus Area: Mobility and Public Transit		
<p>Reduce VMT per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050</p>	<p>The City would update the Transportation Demand Management (TDM) ordinance and develop first/last mile infrastructure improvements around transit stations. TDM strategies would also be implemented consistent with the West Side Mobility Plan to ease congestion.</p>	<p>No Conflict. While this action primarily applies to the City, the Project would be located near mass transit stations to reduce vehicle trips. The Project would also promote a pedestrian-friendly community by placing residential and up to 7,499 square feet of commercial uses within walking distance to other retail and commercial uses. The Project Site is located in a HQTAs as designated by the 2020–2045 RTP/SCS. The Project would also provide bicycle parking spaces in accordance with LAMC requirements for Project residents and visitors.</p> <p>As discussed above, the Project would result in a per capita VMT which is 73 percent lower when compared to SCAG regional estimates.</p>
Focus Area: Mobility and Public Transit		
<p>Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050</p>	<p>The City would increase the electric vehicle ownership by providing rebates for used EVs and chargers, as well as promote trade-in events for electric vehicles. The City would also increase the number of EV charging stations by pursuing public-private partnerships in developing charging stations, streamline permitting processes for EV charger installations and update building codes to simplify EV charging requirements.</p>	<p>No Conflict. The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City requirements.</p>
<p>^a CEC, 2019 Building Energy Efficiency Standards, Fact Sheet. Source: Eyestone Environmental, 2020.</p>		

adopted.¹²⁰ Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, as described in more detail above, and other sustainable features that increase the use of electric vehicles, improving energy efficiency, and reducing water usage, including, but not limited to: (1) WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; (2) Energy Star-labeled appliances; (3) water-efficient plantings with drought-tolerant species; (4) water-conserving plumbing fixtures; (5) insulated window glazing; (6) parking to support electric vehicles, 10 percent with charging equipment and 30 percent EV-ready (i.e., prewired for future chargers); and (7) reserved area for future solar PV panel on roof plus conduit for wiring.

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350 and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the Project's control. While any evaluation of post-2030 Project emissions would be speculative, the Project would not preclude or impeded the State achieving the 2030 targets.

¹²⁰ *Energy and Environmental Economics (E3), Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board (October 2020) Mahone, Amber. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed long-term scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. The model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the “measures needed to meet the 2050 are too far in the future to define in detail.”¹²¹ In the First Update, however, CARB generally described the type of activities required to achieve the 2050 target: “energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately.”¹²²

Although the Project’s emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State’s achievement of that goal and it is reasonable to expect the Project’s emissions level (2,747 metric tons of CO_{2e} per year) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur.¹²³ Stated differently, the Project’s total emissions at build-out presented in Table IV.C-9 on page IV.C-72 in the analysis below, represents the maximum emissions inventory for the Project as California’s emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State’s environmental policy objectives. That inventory takes into account existing regulations, and regulations that would apply to the Project at its build out year. Please refer to Table IV.C-4 and Table IV.C-5 on pages IV.C-49 and IV.C-52, respectively, for applicable regulatory measures that would serve to reduce GHG impacts from the Project. As an example, the Project’s GHG emissions associated with electrical usage would be reduced by an additional 22 percent in Year 2030 and to zero in 2050 since the electricity provider (LADWP) servicing the Project Site must generate electricity with 60 percent renewables in 2030 and 100 percent renewables by 2045 (SB 100). As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would not conflict with the Executive Order’s horizon-year (2050) goal. Further, the Project is consistent with SCAG’s 2020–2045 RTP/SCS which demonstrates that the region would meet the post-2030 GHG reduction goal of 19 percent by 2035. The Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors

¹²¹ CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008.,p. 117.

¹²² CARB, *2017 Scoping Plan Update*, November 2017, p. 18.

¹²³ Such regulatory measures which will further reduce GHG emissions include the RPS under SB 100 which requires 100-percent renewable energy by 2045.

required by SB 375, which, in turn, advances the State's long-term climate policies. As discussed above, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 61 percent reduction in overall VMT and a 60 percent reduction in mobile source GHG emissions compared to the baseline ITE trip generation rates.¹²⁴ This reduction in VMT would further support the goals of the 2020–2045 RTP/SCS with an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2030 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

(iv) Carbon Neutrality

As discussed above, Executive Order B-55-18 establishes a new statewide goal to achieve carbon neutrality no later than 2045 and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant State agencies to develop a framework for implementation and accounting that tracks progress towards this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

Also discussed above, CARB has released a study evaluating three scenarios three scenarios that achieve Carbon Neutrality in California by 2045. The scenarios analyzed to achieve carbon neutrality include a High Carbon Dioxide Removal (CDR) scenario, Zero Carbon Energy scenario, and a Balanced scenario. Under each of these scenarios, CARB proposed reduction strategies for various sectors that contribute GHG emissions throughout the State. Table IV.C-7 on page IV.C-68 provides a summary of key emission reduction strategies required to achieve Carbon Neutrality by 2045. In addition, Table IV.C-7 demonstrates how the Project would be consistent or not conflict with these measures.

Although specific details are not yet available for the GHG reduction measures discussed above, implementation of these measures would require regulations to be enforced by the State. The Project would be required to comply with regulations in support

¹²⁴ *Calculation of mobile source GHG emissions includes vehicle start, idle and running emissions. Vehicle start and idle emissions are based on vehicle trips while running emissions are based on VMT. The Project's VMT reducing features would reduce both VMT and trips, but at different reduction percentages. Therefore, the percent reduction in VMT results in a slight difference when compared to the reduction the Project's mobile source GHG emissions.*

**Table IV.C-7
Project Consistency with 2045 Carbon Neutrality Goals**

Sector	Description	Consistency Analysis
Sector: Low Carbon Fuels	The State would use advanced biofuels for ground transportation, renewable aviation fuel and biomethane for electricity generation. Hydrogen may also be blended into pipeline gas demand as well as hydrogen for fuel cell transportation.	No Conflict. This action primarily applies to the transportation fuel providers. However, the Project would source transportation fuel from these providers that would comply with these reduction measures.
Sector: Buildings	The State would require 100 percent of sales of electric appliances by 2030 through 2040.	No Conflict. While the Project may include natural gas appliances, any purchases of appliances after 2030 would be consistent with State requirements.
Sector: Transportation	The State would require 100 percent Battery Electric Vehicle (BEV) sales for Light Duty Vehicles (LDV) and Medium Duty Vehicles (MDV) as early as 2030. Sales of Heavy Duty Vehicles (HDV) would achieve at least 45 percent BEV or CNG as early as 2035. At least 50 percent of rail within the State would be electrified and 50 percent of in-state aviation be electrified.	No Conflict. Residents, employees and visitors of the Project purchasing vehicles within the State would comply with BEV or compressed natural gas (CNG) vehicle sales requirements. Therefore, the Project would not conflict with requirements on sales of BEV or CNG) powered vehicles. In addition, the Project would install EV charging stations consisting of 10 percent of total parking spaces.
Sector: Industry and Agriculture	The State would require industry to be up to 53 percent electrified and up to 19 percent of energy to be met with hydrogen. Cement, glass, oil and gas industries would be required to achieve carbon capture of at least 14 MMT. Agricultural energy emissions would be reduced by at least 80 percent. Oil and gas extraction and petroleum refining energy demand would be reduced by at least 90 percent.	Not Applicable. The Project would not include industrial or agricultural uses.
Sector: Electricity	Electricity generation within the state is fueled with natural gas, biomethane or hydrogen. At least 95 percent of electricity generation would be zero carbon.	No Conflict. This action primarily applies to the local power utility company (LADWP). However, the Project would source electricity from the LADWP that would comply with these reduction measures.
High GWP and Non-Combustion	Landfill and wastewater methane would be reduced by 23 percent. Pipeline fugitive emissions would be reduced by 72 percent, agricultural methane would be reduced by 41 percent and refrigerants would be reduced by 75 percent. Percent	No Conflict. This action primarily applies to the local water utility (LADWP) and solid waste utility. However, the Project would source water from the LADWP and generate solid waste within the City

Table IV.C-7 (Continued)
Project Consistency with 2045 Carbon Neutrality Goals

Sector	Description	Consistency Analysis
	reductions are relative to Year 2020.	of LA that would comply with these reduction measures.
Sector: Carbon Dioxide Removal	At least 33 million metric tons/year of carbon dioxide removal needed in 2045.	Not Applicable. While this action primarily applies to the State, the Project would comply with this policy as required by current or future regulations.
<p><i>Source: CARB, Achieving Carbon Neutrality in California, Table 1. October 2020; Eyestone Environmental, 2021.</i></p>		

of the goal of Carbon Neutrality by 2045 and would therefore support, and be consistent with, the State's achievement of the goals included in Executive Order B-55-18.

(v) Conclusion

The plan consistency analysis above demonstrates that the Project does not conflict with the plans, policies, regulations, and GHG reduction actions/strategies outlined in applicable GHG reduction plans and policies. As the Project would not conflict with relevant plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, impacts related to regulatory consistency would be less than significant.

(b) Project Emissions

As discussed above, Section 15064.4 of the CEQA guidelines recommends quantification of a Project's GHG emissions. However, the quantification is provided for informational purposes only and Project GHG emissions are not evaluated against any numeric threshold, as compliance with a GHG emissions reduction plan renders a project's potential impacts less than significant. In support of the above regulatory consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the 2008 Climate Change Scoping Plan and subsequent updates, the 2020–2045 RTP/SCS, and L.A.'s Green New Deal, quantitative calculations are provided below.

The Project would result in direct and indirect GHG emissions generated by different types of emissions sources, including:

- Construction: emissions associated with demolition of the existing buildings and surface parking areas, shoring, excavation, grading, and construction-related equipment and vehicular activity;
- Area source: emissions associated with landscaping equipment and consumer products;
- Energy source (building operations): emissions associated with space heating and cooling, water heating, energy consumption, and lighting;
- Mobile source: emissions associated with vehicles accessing the Project Site;
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

The Project would generate an incremental contribution to and cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

(i) Construction

Project construction is assumed to begin in 2022, occur over approximately 36 months, and complete in 2025. As described in Section II, Project Description, of this Draft EIR, construction of the Project would commence with demolition of the existing parking lot and parking structure. This phase would be followed by grading and excavation for the subterranean parking levels and installation of required utilities. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. The construction equipment and truck fleet mix is anticipated to emit less pollution in future years due to more stringent emissions control regulations. The estimated quantity of excavation expected for the subterranean parking approximately 89,750 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil would be hauled from the Project Site during the demolition and excavation phase. The emission of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction is presented in Table IV.C-8 on page IV.C-71.

**Table IV.C-8
Construction-Related Emissions
(MTCO_{2e})**

Year	MTCO _{2e} ^a
2022	1,415
2023	1,465
2024	1,367
2025	696
Total	4,943
Amortized Over 30 Years	165
<p>^a CO_{2e} was calculated using CalEEMod and the results are provided in the Construction CalEEMod output file within Appendix B of this Draft EIR. Source: Eyestone Environmental, 2020.</p>	

As presented in Table IV.C-8, construction of the Project is estimated to generate a total of 4,943 MTCO_{2e}. As recommended by the SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.¹²⁵ This results in annual Project construction emissions of 165 MTCO_{2e}. A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Appendix B of this Draft EIR.

(ii) Operation

Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. The Project Site would include limited use of natural-gas fireplaces within common areas, which would also contribute to area source emissions. However, as discussed above (see Project Design Feature AIR-PDF-2), the proposed residential units would not include indoor natural-gas fireplaces. As shown in Table IV.C-9 on page IV.C-72, the Project, at full buildout, is expected to result in a net increase of 39 MTCO_{2e} per year from area sources. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

¹²⁵ SCAQMD Governing Board Agenda Item 31, December 5, 2008.

Table IV.C-9
Annual GHG Emissions Summary (Buildout)^a
(metric tons of carbon dioxide equivalent [MTCO_{2e}])

Scope	Buildout Without Reducing Measures	Buildout with Reducing Measures	Percent Reduction from Measures (Buildout)^b
Area ^c	129	39	-70%
Energy ^d	1,150	1,057	-8%
Mobile ^e	3,304	1,331	-60%
EV Chargers ^f	(93)	(93)	---
Stationary ^g	<1	<1	0%
Solid Waste ^h	138	33	-76%
Water/Wastewater ⁱ	268	214	-20%
Construction	165	165	0%
Total Emissions	5,062	2,747	-46%

Numbers may not add up exactly due to rounding.

^a CO_{2e} was calculated using CalEEMod and the results are provided in the CalEEMod output file within Appendix B of this Draft EIR. Totals may not add up due to rounding.

^b Certain GHG reduction measures and regulations discussed above in the consistency analysis are not readily quantifiable and were not included as part of the emissions inventory. In addition, some reduction measures are implemented over time such as RPS, LCFS and fuel economy standards. Although the Project accounted for RPS, LCFS and fuel economy standards at Project buildout year, emissions do not reflect increased standards for later years. Therefore, Project emissions presented are conservative and would be lower in future years.

^c Area source emissions are from landscape equipment and fireplaces in common areas.

^d Energy source emissions are based on CalEEMod default electricity and natural gas usage rates. Emissions from electricity generation only take into account carbon intensity at build out year and do not take into account decreasing carbon intensity in subsequent years required by SB 100 (RPS). However, it is recognized that the RPS would require utilities to supply 60 percent renewable energy by 2030.

^e Emissions were calculated with CalEEMod which includes EMFAC2014 emission factors. EMFAC2014 does not take account for further reductions in GHG emission as the result of implementation of LCFS amendments. Mobile source emissions also do not account for increasing fuel economy standards for future years.

^f Emissions were calculated consistent with the requirements of code requirements for EV chargers which requires that 10 percent of parking spaces be equipped with EV chargers.

^g Stationary source emissions are from an on-site emergency generator.

^h Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.

ⁱ Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates. The CalEEMod estimate of water consumption is considered conservative compared to more current water demand rates used by LADWP, and takes into account WAT-PDF-1 which are reflected in Section IV.I.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.

Source: Eyestone Environmental, 2020.

Electricity and Natural Gas Generation Emissions

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO₂ and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections; as LADWP projections are not calculated for every year, straight line interpolation was performed to estimate the LADWP carbon intensity factor for the Project buildout year based on Year 2015 and 2026 data.¹²⁶ LADWP's carbon intensity projections also take into account SB 350 RPS requirements for renewable energy. However, they conservatively do not account for SB 100 RPS requirements for renewable energy.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by 2016 Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and California Residential Appliance Saturation Survey (RASS) studies.¹²⁷ The data are specific for climate zones; therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under 2016 Title 24 building codes, as well as previous iterations of Title 24 building codes promulgated subsequent to preparation of the 2008 Climate Change Scoping Plan. Since the 2008 Scoping Plan, Title 24 was updated in 2010 and 2013 to

¹²⁶ LADWP, *2016 Power Integrated Resource Plan*.

¹²⁷ CEC, *Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010*.

incorporate increasing energy efficiency standards percent. The 2013 Title 24 requirements would improve energy efficiency standards by 25 percent above the 2007 Title 24 requirements.¹²⁸

As discussed above, the Project would be subject to the 2019 Title 24 standards. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting.¹²⁹ Multifamily uses greater than three stories would be required to comply with Title 24 standards for nonresidential buildings.¹³⁰ This analysis conservatively includes a 10-percent reduction in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards. While the analysis accounts for current energy efficiency regulations, future and proposed regulations have not been taken into account. Such regulations include future iterations of Title 24 which will further increase energy efficiency and ZNE requirements. In addition, the Project would not conflict with the goals of achieving Carbon Neutrality by 2045, as discussed above.

The Project would implement a number of project design features that would reduce Project energy consumption. Specifically, Project Design Feature GHG-PDF-1, which would require the Project to incorporate features to further reduce overall energy usage including LEED certification or equivalent green building standards. In addition, Project Design Feature AIR-PDF-2, which would forbid the use of natural gas fireplaces within residential units throughout the Project Site, would reduce GHG emissions resulting from natural gas combustion.

As shown in Table IV.C-9 on page IV.C-72, Project GHG emissions from electricity and natural gas usage would result in a total of 1,056 MTCO_{2e} per year, which reflects a 8-percent reduction in electricity and natural gas emissions with implementation of Project Design Feature GHG-PDF-1 and Project Design Feature AIR-PDF-2.

¹²⁸ *California Lighting Technology Center, University of California, Davis, What's New in the 2013 Code?, March 18, 2014.*

¹²⁹ *California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, December 2018.*

¹³⁰ *Energy Code Ace, Fact Sheet for 2019 Title 24, https://energycodeace.com/download/26048/file_path/fieldList/2019.Whats%20Changed.Nonres.*

Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT.

Mobile source operational GHG emissions were calculated using based on the Project VMT estimates provided by the Mobility Group.¹³¹ As discussed in Section IV.G, Transportation, of this Draft EIR, the LADOT VMT Calculator was used to calculate Project VMT and trip estimates based on the amount of building area for the residential and commercial/retail/restaurant uses. Pass-by trips were determined using applicable trip-generation rates based on the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition*.

As discussed above, the Project design also includes characteristics that would reduce trips and VMT as compared to a project without VMT reducing measures within the Air Basin as measured by the LADOT VMT Calculator. The Project would develop new residential uses on a site that is within an HQTAs and would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is located approximately two blocks away from Metro's 7th/Metro Center Metro Rail station, which contains the Metro Red, Purple, Blue, and Expo Lines and is considered a hub of the regional rail network. The bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with external streets to encourage people to walk instead of drive. As discussed previously, the LADOT VMT Calculator takes into account VMT reducing features such as proximity to transit. As shown in Appendix B, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 61-percent reduction in overall VMT and a 60 percent reduction in mobile source GHG emissions.

As shown in Table IV.C-9 on page IV.C-72, Project GHG emissions from mobile sources would result in a net increase of 1,331 MTCO_{2e} per year which accounts for a 1,973 MTCO_{2e} per year reduction associated with above discussed USEPA MXD VMT reduction features applicable to the Project (e.g., accessibility to mass transit and proximity to other commercial and entertainment uses). Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

¹³¹ *The Mobility Group, 8th, Grand and Hope Transportation Assessment, May 2020 revised December 2020.*

The Project's GHG emissions inventory does not take into account future regulations to reduce vehicle GHG emissions. As discussed above, the Project would not conflict with GHG reduction measures to achieve the goals of B-55-18 (Carbon Neutrality by 2045). GHG reduction measures provided above in Table IV.C-4 and Table IV.C-5 on pages IV.C-49 and page IV.C-52 (e.g., increased use of low carbon fuel standards and further electrification of the mobile fleet) also include future regulations not accounted for in the Project's GHG emissions inventory. Also, Governor Gavin Newsom has issued an executive order to require all new passenger cars and trucks sold to be zero-emission vehicles by 2035.¹³² These future regulatory compliance measures would further reduce Project-related mobile source emissions and would help support the State's goals of achieving Carbon Neutrality by 2045 as well as AB 32 and SB 32.

Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table IV.C-9 on page IV.C-72, the Project scenario is expected to result in less than 1 MTCO_{2e} per year from stationary sources.

Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. The Project without reducing features assumes that all solid waste would be sent to landfills without any diversion or recycling. However, the Project takes into account diversion and recycling activities within the City of Los Angeles. As shown in Table IV.C-9, Project GHG emissions from solid waste generation would result in a total of 33 MTCO_{2e} per year which accounts for a 76-percent recycling/diversion rate.

The Project's GHG emissions inventory does not take into account solid waste diversion rates and recycling legislation in future years anticipated beyond Project buildout (Year 2025). Such legislation includes AB 1826, which requires commercial uses to recycle a specific amount of organic waste. Waste diversion requirements under AB 1826 is intended to be phased in over time depending on the reduction of organic waste achieved. Based on recycling rates as of September 2020, CalRecycle has reduced the threshold to two cubic yards of solid waste generated by covered businesses. As AB 1826 waste diversion rates are based on recycling rates, future diversion rates are not yet known

¹³² *State of California, Executive Order N-79-20, September 23, 2020.*

and not accounted for in the Project's GHG emissions inventory. Also as discussed above the Project would not conflict with GHG reduction measures to achieve the goals of B-55-18. Such GHG reduction measures pertaining to solid waste include reducing methane from landfills by 23 percent relative to Year 2020. Therefore, the Project would support the State's goals of achieving Carbon Neutrality by 2045 as well as AB 32 and SB 32.

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, distribute water, and treat wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water; these include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor¹³³ to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen, 2017 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code, and reflect an approximately 20-percent reduction as compared to the base demand. Base water use demand is determined by the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code.

The Project's GHG emissions inventory does not take into account future water conservation measures. Recently enacted legislation include Senate Bill 606 and Assembly Bill 1668, which serve as a roadmap to establish water conservation targets and reduce water usage beyond what is currently accounted for in the Project's GHG emissions inventory.¹³⁴ While Senate Bill 606 and Assembly Bill 1668 focus on improving water conservation efforts and drought planning, a reduction in water usage would also result in a reduction in GHG emissions. Also as discussed above the Project would not conflict with

¹³³ *The intensity factor reflects the average pounds of CO₂e per megawatt generated by a utility company.*

¹³⁴ *California Department of Water Resources, Fast Facts on the Water Conservation Legislation.*

GHG reduction measures to achieve the goals of B-55-18. Such GHG reduction measures pertaining to water usage include reducing methane from wastewater facilities by 23 percent relative to Year 2020. Therefore, the Project would support the State's goals of achieving Carbon Neutrality by 2045 as well as AB 32 and SB 32.

As shown in Table IV.C-9 on page IV.C-72, Project GHG emissions from water/wastewater usage would result in a total of 214 MTCO_{2e} per year, which accounts for a 20-percent reduction in water/wastewater emissions with implementation of Project Design Feature WAT-PDF-1 provided in Section IV.I.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR as compared to the Project without project design features. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(iii) Combined Construction and Operational Impacts

As shown in Table IV.C-9, when taking into consideration implementation of relevant project design features, as well as the requirements set forth in the City of Los Angeles Green Building Code, and full implementation of current State mandates, the Project's GHG emissions for the Project in 2025 would equal 165 MTCO_{2e} per year (amortized over 30 years) during construction and 2,582 MTCO_{2e} per year during operation of the Project with a combined total of 2,747 MTCO_{2e} per year.

As discussed above, the Project's GHG emissions inventory does not take into account future regulations and legislation to reduce GHG emissions to achieve Carbon Neutrality by 2045. However, for all the reasons described above, the Project would support the State's goals of B-55-18 as well as AB 32 and SB 32.

(c) Conclusion

In summary, the Project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. More specifically, the plan consistency analysis provided above demonstrates that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in CARB's 2008 Climate Change Scoping Plan and subsequent updates (2013 and 2017), SCAG's 2020–2045 RTP/SCS, and the City's Green New Deal, as well as the City's Green Building Code. As the Project would not conflict with relevant plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, impacts related to regulatory consistency would be less than significant. **Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG**

emissions as described above would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be less than significant.

(2) Mitigation Measures

Project-level impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Project-level impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

e. Cumulative Impacts

(1) Impact Analysis

As explained above, the analysis of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem and the emissions from any single project alone would be negligible. Accordingly, the analysis above took into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.C-9 on page IV.C-72 illustrates that implementation of the Project's regulatory requirements and project design features, including State mandates, would contribute to GHG reductions. These reductions support State goals for GHG emissions reduction.

The analysis shows that the Project is consistent with CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The Project is also consistent with the 2020–2045 RTP/SCS' regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. Furthermore, the Project would generally comply with the aspirations of the City's Green New Deal, which includes specific targets related to housing and development, and mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. **For these reasons, the Project's cumulative contribution to global climate change is less than significant.**

(2) Mitigation Measures

Cumulative impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.