IV. Environmental Impact Analysis
E. Greenhouse Gas Emissions

1. Introduction

This section compares the Project's characteristics with applicable regulations, plans, and policies set forth by the State of California, the Southern California Association of Governments (SCAG) and the City to reduce greenhouse gas (GHG) emissions to determine whether the Project is consistent with and/or would conflict with the provisions of these plans. To assist in analyzing the Project's potential to conflict with applicable regulations, plans and policies, this section also estimates the Project's GHG emissions generated by Project construction and operations, taking into account mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions. Details of the GHG analysis are provided in the *2159 Bay Street Greenhouse Gas Calculation Worksheets*, which is included as Appendix B of this Draft EIR, and are incorporated by reference.

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 severe weather events. 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, as GHG from human activities increase, they build up in the atmosphere and warm the climate, leading to many other changes around the world—

in the atmosphere, on land, and in the oceans, 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 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 43 times between 1990 and 2015. In addition, in the Global Carbon Budget 2020 report, published in December 2020, atmospheric carbon dioxide (CO_2) concentrations in 2019 were found to be approximately 410 ppm which is an increase from the pre-industrial level of approximately 277 parts per million, and the present concentration is the highest during at least the last 800,000 years.[3] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. Regarding emissions of non-CO_2 GHGs, these have increased significantly since 1900.[4] In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) 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

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1 *USEPA, Climate Change Indicators: Greenhouse Gases, www.epa.gov/climate-indicators/greenhouse-gases, accessed February 24, 2022.*

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

3 *P. Friedlingstein, et al., Global Carbon Budget 2020, (Earth System Science Data, 2020, https://essd.copernicus.org/articles/12/3269/2020/).*

4 *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed October 4, 2021.*

5 *USEPA, Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases, updated April 2021.*

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. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

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

Regarding the adverse effects of global warming, as reported by the 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 ranked fifth lowest among the states in CO2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. 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 Fundamentals

GHGs are those compounds in Earth's atmosphere that play a critical role in determining temperature near Earth's surface. GHGs include carbon dioxide (CO_2),

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6 *United Nations Framework Convention on Climate Change, Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007.*

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

methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] More specifically, these gases allow high-frequency shortwave solar radiation to enter Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Compounds that are regulated as GHGs are discussed in Table IV.E-1 on page IV.E-5.[9,10]

Not all GHGs possess the same ability to induce climate change. Carbon dioxide is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant but have higher global warming potential (GWP) than CO_2. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years otherwise referred to as atmospheric lifetime) relative to that of CO_2.

The larger the GWP, the more that a given gas warms Earth compared to CO_2 over that time period.[11] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values in its Fourth Assessment Report (AR4). The GWPs in the IPCC AR4 are used by CARB for reporting Statewide GHG emissions inventories, consistent with international reporting standards. By applying the GWP ratios, Project-related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline.

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

9 *Intergovernmental Panel on Climate Change, Second Assessment Report, Working Group I: The Science of Climate Change, 1995.*

10 *Intergovernmental Panel on Climate Change, Fourth Assessment Report, Working Group I Report: The Physical Science Basis, 2007, Table 2.14.*

11 *GWPs 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). CARB has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.*

Table IV.E-1
Description of Identified GHGs[a]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric 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 (CH_4)	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 (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O 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_2H_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 (SF_6)	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 (NF_3)	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 (AEGLs) for Nitrogen Trifluoride; January 2009.

The IPCC has issued an updated Fifth Assessment Report (AR5), which has revised down the majority of the GWP for key regulated pollutants. As CARB still uses AR4 values and the modeling software CalEEmod is built on these assumptions, AR4 GWP values are used for the Project. Generally, the changes from AR4 to AR5 are reductions in warming potential for the GHG most associated with construction and operation of typical development projects. The GWP from AR4 and AR5 and atmospheric lifetimes for key regulated GHGs are provided in Table IV.E-2 on page IV.E-7.

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 is responsible for preparing reports to the Governor on the status of CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[12] 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, 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

[12] *State of California Department of Justice, Office of the Attorney General, Climate Change Impacts in California, https://oag.ca.gov/environment/impact, accessed October 4, 2021.*

Table IV.E-2
Atmospheric Lifetimes and Global Warming Potentials

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year Time Horizon) (AR4 Assessment	Global Warming Potential (100-Year Time Horizon) (AR5 Assessment)
Carbon Dioxide (CO_2)	50–200	1	1
Methane (CH_4)	12 (+/-3)	25	28
Nitrous Oxide (N_2O)	114	298	265
HFC-23: Fluoroform (CHF_3)	270	14,800	12,400
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430	1,300
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124	138
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390	6,630
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200	11,100
Sulfur Hexafluoride (SF_6)	3,200	22,800	22,500
Nitrogen Trifluoride (NF_3)	740	17,200	16,100

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 February 24, 2022.

change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (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.[13]

c. Regulatory Framework

There are a number of plans, regulations, programs, and agencies that provide policies, requirements, and guidelines regarding GHG emissions at the federal, state,

[13] *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.*

regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Federal Clean Air Act
- Corporate Average Fuel Economy (CAFE) Standards
- Energy Independence and Security Act
- California Air Resources Board
- California GHG Reduction Targets
- California Global Warming Solutions Act (AB 32)
- Climate Change Scoping Plan
- Cap-and-Trade Program
- Emission Performance Standards
- Renewables Portfolio Standard Program
- Clean Energy and Pollution Reduction Act
- Pavley Standards
- California Low Carbon Fuel Standard
- Advanced Clean Cars Regulations
- Sustainable Communities and Climate Protection Act (SB 375)
- Senate Bill 743
- Executive Order N-79-20
- California Appliance Efficiency Regulations
- Title 24, Building Standards Code and CALGreen Code
- CEQA Guidelines
- South Coast Air Quality Management District
- Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

- Green New Deal
- City of Los Angeles Green Building Code
- City of Los Angeles Solid Waste Programs and Ordinances
- City of Los Angeles General Plan
- Traffic Study Policies and Procedures

(1) Federal

(a) Federal Clean Air Act

The USEPA is responsible for implementing federal policy to address GHGs. The United States Supreme Court (Supreme Court) ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO_2 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. In December 2009, U.S. EPA issued an endangerment finding for GHGs under the CAA, setting the stage for future regulation.

The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, CH_4 and other non-CO_2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

(b) Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush Administration issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In The National Highway Traffic Safety Administration (NHTSA) subsequently issued multiple final rules regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011 and later for model years 2012–2016, and 2017–2021. In March 2010, the USDOT and the USEPA issued the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe CO_2 emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021

through 2026.[14] These standards set a combined fleet wide average of 36.9 to 37 miles per gallon (mpg) for the model years affected.[15]

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 CO_2 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 USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. Building on the first phase of standards, 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 CO_2 emissions by approximately 1.1 billion metric tons.[16]

(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

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[14] *United States Environmental Protection Agency, Final Rule for Model Year 2021–2026 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, published April 30, 2020.*

[15] *National Highway Traffic Safety Administration (NHTSA), Corporate Average Fuel Economy standards.*

[16] *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.*

- 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.

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."[17]

(2) State

(a) California Air Resources Board

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the State to take over implementation of the Federal CAA. CARB also has primary responsibility for adopting regulations to meet the State's goal of reducing GHG emissions. The State has met its goals to reduce GHG emissions to 1990 levels by 2020. Subsequent state goals include reducing GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

(b) California Greenhouse Gas Reduction Targets

(i) Executive Order S-3-05

Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;

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[17] *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.*

- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and Legislature on the State of GHG reductions in the State, as well as strategies for mitigating and adapting to climate change.

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.

(ii) Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e.

(iii) Executive Order B-55-18

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, 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 was used by CARB in development of the 2022 Scoping Plan update, released May 10, 2022.[18] 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 CO_2 removal strategies. The Zero Carbon Energy scenario is based on the assumption of zero-fossil fuel emissions by 2045. The Balanced scenario represents a middle point between the High CDR scenario and Zero Carbon Energy scenario. The scenarios would achieve at least an 80-percent reduction in GHGs by 2045, relative to 1990 levels. Remaining CO_2 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.[19,20]

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.

(c) California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5—California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO2, CH4, N2O, HFCs, PFCs, and SF6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions.

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18 *Energy+Environmental Economics (E3), Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board, October 2020.*

19 *Sinks are defined as natural or artificial reservoirs that accumulate and store a carbon-containing chemical compound for an indefinite period.*

20 *Energy+Environmental Economics (E3), Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board, October 2020, p. 22.*

To achieve these goals, 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 regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[21]

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach disadvantaged communities. The new goals outlined in SB 32 update the scoping plan requirement of AB 32 and involve 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.

AB 197, signed September 8, 2016, is a bill associated with SB 32 and signed on September 8, 2016, 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 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.

(d) Climate Change Scoping Plan

AB 32 required CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (HSC Section 38561 (h)). The 2008 Climate Change Scoping Plan proposed a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy

[21] *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.*

sources, save energy, create new jobs, and enhance public health."[22] The 2008 Climate Change Scoping Plan identified a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a Cap-and-Trade Program, and an AB 32 implementation fee to fund the program.

The 2008 Climate Change Scoping Plan called for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard (RPS).[23] Additionally, the 2008 Climate Change Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas 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 Climate Change Scoping Plan

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[22] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008.*

[23] *For a discussion of Renewables Portfolio Standard, refer to subsection 2(h)i, California Renewables Portfolio Standard.*

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.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 $MMTCO_2e$ using the GWP values from the IPCC SAR. Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California must make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the "business-as-usual" or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 Climate Change Scoping Plan, as approximately 596 $MMTCO_2e$ (using GWP values from the IPCC SAR). For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. Therefore, under these original projections, the State would have had to reduce its 2020 BAU emissions by 28.4 percent to meet the 1990 target of 427 $MMTCO_2e$.

(i) 2014 Update to the Climate Change Scoping Plan

The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.[24] In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined the 1990 GHG emissions inventory and 2020 GHG emissions limit to be increased to 431 $MMTCO_2e$. CARB also updated the State's 2020 BAU emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that had recently been adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 was 509.4 $MMTCO_2e$. Therefore, under the first update to the Scoping Plan, the emission reductions necessary to achieve the 2020 emissions target of 431 $MMTCO_2e$ would have been 78.4 $MMTCO_2e$, or a reduction of GHG emissions by approximately 15.4 percent, (down from 28.4 percent).

[24] *CARB, First Update to the AB 32 Scoping Plan, 2014.*

The First Update "highlights… 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."[25] 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.[26]

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."[27] 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."[28] 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.

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.

(ii) 2017 Update to the Climate Change Scoping Plan

In response to the passage of SB 32 and the identification of the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan in December

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[25] *CARB, 2014 Update, May 2014, p. 4.*

[26] *CARB, 2014 Update, May 2014, p. 34.*

[27] *CARB, 2014 Update, May 2014, p. 6.*

[28] *CARB, 2014 Update, May 2014, p. 32.*

2017.[29] The 2017 Update built 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 included policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies addressed the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrain and reduce emissions at covered sources.[30]

CARB's projected Statewide 2030 emissions takes into account 2020 GHG reduction policies and programs.[31] The 2017 Scoping Plan also addressed GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade Program. Additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. Implementation of mobile source strategies (cleaner technology and fuels) include the following:

- 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

[29] *CARB, California's 2017 Climate Change Scoping Plan, November 2017.*

[30] *CARB, 2017 Update, November 2017, p. 6.*

[31] *CARB, 2017 update, November 2017.*

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 trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes Zero-Emission Vehicles (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 vehicle miles traveled (VMT) through continued implementation of SB 375 and regional SCS; 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."

The alternatives in the Scoping Plan were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade Program is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade Program to 2030.

The 2017 Scoping Plan discussed the role of local governments in meeting the State's GHG reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations.[32] Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.[33]

For individual projects under CEQA, the 2017 Scoping Plan stated that local governments can support climate action when considering discretionary approvals and entitlements. According to the 2017 Scoping Plan, lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the Scoping Plan, the State's long-term goals, and climate change science.[34]

The City of Los Angeles has not developed per capita targets for 2030 or 2050; however, the City recognizes that GHG emissions reductions are necessary in the public and private sectors. The City has taken the initiative in combating climate change by

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[32] *CARB, 2017 Update, November 2017, p. 97.*

[33] *CARB, 2017 Update, November 2017, p. 97.*

[34] *CARB, 2017 Update, November 2017, p. 100.*

developing programs such as the Green New Deal and Green Building Code. Each of these programs is discussed further below.

A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in Table IV.E-3 on page IV.E-21.

Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation (or carbon tax) is expected to cover approximately 34 to 79 $MMTCO_2$ of the 2030 reduction obligation.[35] The State's short-lived climate pollutants strategy, which is for GHGs that remain in the atmosphere for shorter periods of time compared to longer-lived GHGs, such as CO_2, is expected to cover approximately 17 to 35 $MMTCO_2e$. The RPS with 50 percent renewable electricity by 2030 is expected to cover approximately 3 $MMTCO_2$. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG emissions standards, increasing the number of zero emission vehicles and improving the freight system efficiency, and is expected to cover approximately 11 to 13 $MMTCO_2$. Under the Scoping Plan Scenario, CARB expects that the reduction in GHGs from doubling of the energy efficiency savings in natural gas and electricity end uses in the CEC 2015 Integrated Energy Policy Report by 2030 would cover approximately 7 to 9 $MMTCO_2$ of the 2030 reduction obligation. The other strategies would be expected to cover the remaining 2030 reduction obligations.

(e) Cap-and-Trade Program

The Climate Change Scoping Plan identified a Cap-and-Trade Program as one of the strategies California would employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of ultimately achieving an 80-percent reduction from 1990 levels by 2050 . Under the Cap-and-Trade Program, an overall limit on GHG emissions from capped sectors was established, and facilities subject to the cap will able to trade permits to emit GHGs.

CARB designed and adopted a California Cap-and-Trade Program[36] pursuant to its authority under AB 32. The Cap-and-Trade Program was designed to reduce GHG emissions from public and private major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve the State's emission-reduction mandates. The statewide cap for GHG emissions from the

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[35] *CARB, California's 2017 Climate Change Scoping Plan, Appendix G, November 2017.*

[36] *California Code of Regulations 17, Sections 95800–96023.*

Table IV.E-3
Estimated Statewide Greenhouse Gas Emissions Reductions Required by HSC Division 25.5

Emissions Scenario	GHG Emissions ($MMTCO_2E$)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	169 (28.4%)[a]
2014 Scoping Plan Update (IPCC AR4)	
2020 BAU Forecast (CARB 2014 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	78.4 (15.4%)[b]
2017 Scoping Plan Update	
2030 BAU Forecast ("Reference Scenario" which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction below Business-As-Usual Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%)[c]

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents

[a] *596 – 427 = 169 / 596 = 28.4%*

[b] *509.4 – 431 = 78.4 / 509.4 = 15.4%*

[c] *389 – 260 = 129 / 389 = 33.2%*

Source: CARB, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; CARB, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition, 2017, www.arb.ca.gov/cc/inventory/data/bau.htm, accessed February 25, 2022; CARB, California's 2017 Climate Change Scoping Plan, November 2017.

capped sectors[37] (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration.

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 that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[38] Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under

[37] *California Code of Regulations 17, Sections 95811, 95812.*

[38] *California Code of Regulations 17, Section 95812.*

the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").[39]

Each covered entity with a compliance obligation is required to surrender "compliance instruments"[40] for each MTCO2e of GHG they emit. Covered entities are allocated free allowances in whole or part (if eligible), and can buy allowances at auction, purchase allowances from others, or purchase offset credits. The Cap-and-Trade Regulation provides a firm cap, ensuring that the statewide emission limits will not be exceeded.

In sum, 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.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.[41] Accordingly, for projects that are subject to CEQA, GHG emissions associated with 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 Program's first compliance period. [42]

The Program applies to emissions that cover approximately 80 percent of the State's GHG emissions. Demonstrating the efficacy of AB 32 policies, California achieved its 2020 GHG Reduction Target four years earlier than mandated. The largest reductions were the result of increased renewable electricity in the electricity sector, which is a covered sector in the Cap-and-Trade Program.

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

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39 California Code of Regulations 17, Sections 95100–95158

40 Compliance instruments are permits to emit, the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8% of their compliance obligations.

41 California Code of Regulations 17, Section 95811(b).

42 California Code of Regulations 17, Sections 95811, 95812(d).

the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

(f) Energy-Related (Stationary) Sources

(i) Emission Performance Standards

SB 1368, signed September 29, 2006, is a companion bill to AB 32, which 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.

(ii) Renewables Portfolio Standard

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017 as a RPS. Subsequent amendments provided additional targets throughout the years. Most recently, on October 7, 2015, SB 350 (Chapter 547, Statues of 2015), also known as the Clean Energy and Pollution Reduction Act, further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 also requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. The 2017 Climate Change Scoping Plan incorporated the SB 350 standards and estimated the GHG reductions would account for approximately 21 percent of the Scoping Plan reductions.[43] On September 10, 2018, SB 100 provided additional RPS targets of 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by 2045.[44]

(g) Mobile Sources

(i) Pavley Standards

AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, requires CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles

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[43] *CARB, California's 2017 Climate Change Scoping Plan, Table 3, p. 31, November 2017. Calculated as: (108 – 53) / 260 = 21 percent.*

[44] *California Legislative Information, SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases.*

whose primary use is non-commercial personal transportation manufactured in and after 2009. In 2004, CARB approved the Pavley regulation to require automakers to control GHG emissions from new passenger vehicles for the 2009 through 2016 model years. Upon adoption of subsequent federal GHG standards by the United States Environmental Protection Agency (USEPA) that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California's standards in the 2012 through 2016 model years. This is referred to as the "deemed to comply" option.

In January 2012, CARB approved GHG emission regulations which require further reductions in passenger GHG emissions for 2017 and subsequent vehicle model years. As noted above, in August 2012, the USEPA and USDOT adopted GHG emission standards for model year 2017 through 2025 vehicles.[45] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017–2025 national standards to meet state law. Automobile manufacturers generally comply with these standards through a combination of improved energy efficiency in vehicle equipment (e.g., air conditioning systems) and engines as well as sleeker aerodynamics, use of strong but lightweight materials, and lower-rolling resistance tires.[46]

(ii) California Low Carbon Fuel Standard

Executive Order S-01-07 was enacted by Governor Arnold Schwarzenegger on January 18, 2007. The order mandates the following: (1) that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. The final regulation was approved by the State's Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.[47]

The development of the 2017 Scoping Plan Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In

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[45] *United States Environmental Protection Agency, 2012.*

[46] *CARB, California's Advanced Clean Cars Midterm Review, pp. ES-17, C-9.*

[47] *CARB, Low Carbon Fuel Standard, About, ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about, accessed February 25, 2022.*

September 2018, the standards were amended by CARB to require a 20 percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.[48]

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015–2025.[49] 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 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.[50] During the March 2017 midterm review, 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.[51]

In addition, Governor Gavin Newsom signed an executive order (Executive Order No. N-79-20) on September 23, 2020, that would phase out sales of new gas-powered passenger cars by 2035 in California with an additional 10-year transition period for heavy vehicles. The State would not restrict used car sales, nor forbid residents from owning gas-powered vehicles. In accordance with the executive order, CARB has developed a 2020 Mobile Source Strategy, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The strategies will provide important information for numerous regulations and incentive programs going forward by conveying what is necessary to address the aggressive emission reduction requirements.

The primary mechanism for achieving the ZEV target for passenger cars and light trucks is CARB's Advanced Clean Cars II (ACC II) Program. The ACC II regulations will focus on post-2025 model year light-duty vehicles, as requirements are already in place for new vehicles through the 2025 model year. A rulemaking package is anticipated to be presented to the Board members in June 2022.

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[48] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, accessed December 18, 2019*

[49] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, accessed December 18, 2019.*

[50] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, accessed December 18, 2019.*

[51] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed October 4, 2021.*

(iv) Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Chapter 728, Statutes of 2008), which was adopted by the State on September 30, 2008, establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."[52] Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations (MPOs), to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. SCAG is the MPO in which the City of Los Angeles is located in. CARB set targets for 2020 and 2035 for each of the 18 MPO regions in 2010, and updated them in 2018.[53] In March 2018, the CARB updated the SB 375 targets for the SCAG region to require an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.[54] As discussed further below, SCAG has adopted an updated Regional Transportation Plan/Sustainable Community Strategies (RTP/SCS) subsequent to the update of the emission targets. 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.[55]

Under SB 375, the target must be incorporated within that region's RTP, which is used for long-term transportation planning, in a SCS. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

(v) Senate Bill 743

Governor Jerry 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 Governor's 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 GHG emissions, the development of

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[52] *State of California, Senate Bill No. 375, September 30, 2008.*

[53] *CARB, Sustainable Communities & Climate Protection Program, About, ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about, accessed February 28, 2022.*

[54] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets, 2018.*

[55] *SCAG, Final 2020–2045 RTP/SCS, Chapter 0: Making Connections, 2020, p. 5.*

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

The Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608), 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) Title 24, Building Standards Code and CALGreen Code

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[56] The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such

[56] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[57]

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, will come into effect on January 1, 2023. The 2022 Title 24 standards continue to improve upon the 2019 Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings which encourage use of electric heat pumps, requiring newly constructed residences to be electric ready and introduces solar and battery storage standards as an optional measure to achieve compliance and increase minimum ventilation requirements to improve air quality. The 2022 Title 24 standards also require that, for building permits submitted on or after January 1, 2023, proposed buildings meeting specified use and criteria include the installation of a photovoltaic system and battery storage systems based on feasibility and square footage available. Compliance with Title 24 is enforced through the building permit process.

(i) CEQA Guidelines

In August 2007, the California State Legislature adopted Senate Bill 97 (SB 97) (Chapter 185, Statutes of 2007), requiring the OPR to prepare and transmit new CEQA Guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. In response to SB 97, the OPR adopted CEQA guidelines that became effective on March 18, 2010.

However, neither a threshold of significance or any specific mitigation measures are included or provided in the guidelines.[58] The guidelines 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. Discretion is given 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, three factors are identified 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;

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[57] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[58] *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).*

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.[59]

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[60]

(3) Regional

(a) South Coast Air Quality Management District

The City of Los Angeles is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[61] A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds.[62] The SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, commercial/ residential projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the

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[59] *14 Cal. Code Regs. § 15064.4(b).*

[60] *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.*

[61] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, www3.aqmd.gov/hb/2008/December/ 081231a.htm, accessed February 28, 2022.*

[62] *SCAQMD, Greenhouse Gases CEQA Significance Thresholds, www.aqmd.gov/home/regulations/ceqa/ air-quality-analysis-handbook/ghg-significance-thresholds, accessed February 28, 2022.*

SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where 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). The Working Group has been inactive since 2011, and SCAQMD has not formally adopted any GHG significance threshold for other jurisdictions.

(b) SCAG Regional Transportation Plan/Sustainable Communities Strategy

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020-2045 RTP/SCS in September, 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 due to 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.[63] By 2045, the integrated growth forecast estimates 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 Areas[64] (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. 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 land use planning best practice in the SCAG region because they concentrate roadway

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[63] *2020–2045 RTP/SCS population growth forecast methodology includes data for years 2010, 2010, 2016, and 2045.*

[64] *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.*

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.[65] 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. The SB 375 target focuses on the amount of vehicle travel per capita. As discussed above, OPR recommended that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (i.e., SB 375 goal). 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.

(4) Local

(a) Green New Deal

The City of Los Angeles addressed the issue of global climate change in *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* ("LA Green Plan/ClimateLA") in 2007. This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities. Subsequently, on April 8, 2015, Mayor Eric Garcetti released the Sustainable City pLAn, which includes both short-term and long-term aspirations through the year 2035 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.[66] Specific targets included the construction of new housing units within 1,500 feet of transit by 2017, reducing VMT per capita by five percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. The Sustainable City pLAn was intended to be updated every four years.

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65 *SCAG, Final 2020–2045 RTP/SCS, Chapter 0: Making Connections, 2020, p. 5.*

66 *City of Los Angeles, Sustainable City pLAn, April 2015.*

In April 2019, the Sustainable City pLAn was updated and renamed the Green New Deal, which consists of a program of actions designed to create sustainability-based performance targets through 2050 to advance economic, environmental, and equity objectives.[67] The Green New Deal augments, expands, and elaborates L.A.'s vision for a sustainable future and tackles the climate emergency with accelerated targets and new aggressive goals.

While not a plan adopted solely to reduce GHG emissions, within the Green New Deal, Climate Mitigation," or reduction of GHG is one of eight explicit benefits that help define its strategies and goals. These include reducing GHG emissions through near-term outcomes:

- Reduce potable water use per capita by 22.5 percent by 2025; 25 percent by 2035; and maintain or reduce 2035 per capita water use through 2050.
- Reduce building energy use per square feet for all building types 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050 (from a baseline of 68 thousand British thermal units (mBTU) per square foot in 2015).
- All new buildings will be net zero carbon by 2030 and 100 percent of buildings will be net zero carbon by 2050.
- Increase cumulative new housing unit construction to 150,000 by 2025; and 275,000 units by 2035.
- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035.
- Increase the percentage of all trips made by walking, biking, micro-mobility/ matched rides or transit to at least 35 percent by 2025, 50 percent by 2035, and maintain at least 50 percent by 2050.
- Reduce VMT per capita by at least 13 percent by 2025; 39 percent by 2035; and 45 percent by 2050.
- Increase the percentage of electric and zero emission vehicles in the city to 25 percent by 2025; 80 percent by 2035; and 100 percent by 2050.
- Increase landfill diversion rate to 90 percent by 2025; 95 percent by 2035 and 100 percent by 2050.

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

- Reduce municipal solid waste generation per capita by at least 15 percent by 2030, including phasing out single-use plastics by 2028 (from a baseline of 17.85 pounds of waste generated per capita per day in 2011).

- Eliminate organic waste going to landfill by 2028.

- Reduce urban/rural temperature differential by at least 1.7 degrees by 2025; and 3 degrees by 2035.

- Ensure proportion of Angelenos living within 1/2 mile of a park or open space is at least 65 percent by 2025; 75 percent by 2035; and 100 percent by 2050.

(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 adding a new Article 9 to incorporate various provisions 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. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Article 9, Division 5 includes mandatory measures for newly constructed nonresidential and high-rise residential buildings.

(c) City of Los Angeles Solid Waste Programs and Ordinances

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced as well as disposal energy averted. In 1989, California enacted AB 939, the California Integrated Waste Management Act, which establishes a hierarchy for waste management practices such as source reduction, recycling, and environmentally safe land disposal.

The City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, whose goal is to lead the City towards being a “zero waste” City by 2030. These waste reduction plans, policies, and regulations, along with Mayoral and City Council directives, have increased the level of

waste diversion for the City to 76 percent as of 2013.[68] In addition, the City adopted the Recovering Energy, Natural Resources, and Economic Benefit from Waste for Los Angeles (RENEW LA) Plan in 2006, which aims to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources not going to disposal and achieving a diversion rate of 90 percent or more by 2025.[69] The City also approved the Waste Hauler Permit Program (Ordinance No. 181,519, LAMC Chapter VI, Article 6, Section 66.32-66.32.5), which requires private waste haulers to obtain AB 939 Compliance Permits to transport construction and demolition waste to City-certified construction and demolition waste processors. The City's Exclusive Franchise System Ordinance (Ordinance No. 182,986), among other requirements, sets a maximum annual disposal level and diversion requirements for franchised waste haulers to promote waste diversion from landfills and support the City's zero waste goals. These programs reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste.

(d) City of Los Angeles General Plan

The City does not have a General Plan Element specific to climate change and GHG emissions, and its General Plan does not have any stated goals, objectives, or policies specifically addressing climate change and GHG emissions. However, the following five goals from the City's General Plan Air Quality Element would also lead to GHG emissions reductions:

- 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

[68] *City of Los Angeles, Department of Public Works, LA Sanitation, Recycling. www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r?_adf.ctrl-state=kq9mn3h5a_188, accessed February 28, 2022.*

[69] *City of Los Angeles, RENEW LA, Five-Year Milestone Report, 2011.*

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.

(e) Traffic Study Policies and Procedures

The City of Los Angeles Department of Transportation (LADOT) has developed the City Transportation Assessment Guidelines (TAG) (July 2019 updated July 2020) to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a transportation impact assessment. The TAG establishes the reduction of vehicle trips and VMT as the threshold for determining transportation impacts and thus is an implementing mechanism of the City's strategy to reduce land use transportation-related GHG emissions consistent with AB 32, SB 32, and SB 743.

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 one percent of global and 6.4 percent of national GHG emissions.[70] California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California consist of CO_2 produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2019.[71] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The GHG inventory for California for years 2012 through 2019 is presented in Table IV.E-4 on page IV.E-36. As shown in Table IV.E-4, the GHG inventory for California in 2019 was

[70] *CEC, Tracking Progress, Greenhouse Gas Emission Reductions, December 2018*

[71] *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.E-4
California GHG Inventory
(million metric tons CO2e)

	2013	2014	2015	2016	2017	2018	2019
Transportation	161.24	162.56	166.19	169.76	171.18	169.63	166.14
On Road	147.15	147.85	151.2	155.16	156.57	154.57	151.58
Passenger Vehicles	111.52	112.2	166.32	119.02	120.12	119.48	119.11
Heavy Duty Trucks	35.62	35.65	34.88	36.14	36.45	35.09	32.47
Ships & Commercial Boats	3.86	3.95	3.89	3.72	3.82	3.74	3.84
Aviation (Intrastate)	3.93	3.9	4.22	4.44	4.68	4.65	4.36
Rail	2.4	2.63	2.42	2.17	1.83	2.22	1.6
Off Road	2.33	2.43	2.53	2.63	2.73	2.83	2.93
Unspecified	1.57	1.79	1.93	1.64	1.55	1.61	1.83
Percent of Total Emissions	36%	37%	38%	40%	40%	40%	40%
Electric Power	91.39	88.85	84.83	68.57	62.13	63.11	58.83
In-State Generation	51.41	52.05	50.88	42.2	38.18	38.54	37.16
Natural Gas	47.66	47.07	46.19	38.18	34.65	35	33.65
Other Fuels	2.88	4.11	3.57	2.61	2.66	2.71	2.72
Fugitive and Process Emissions	0.87	0.88	1.12	1.42	0.88	0.83	0.8
Imported Electricity	39.99	36.8	33.94	26.36	23.95	24.57	21.67
Unspecified Imports	11.83	13.45	11.22	9.69	8.85	11.57	9.9
Specified Imports	28.15	23.35	22.72	16.67	15.1	13	11.77
Percent of Total Emissions	20%	20%	19%	16%	15%	15%	14%
Commercial and Residential	44.18	38.23	38.84	40.61	41.27	41.36	43.81
Residential Fuel Use	28.99	23.8	24.22	25.25	25.99	25.74	27.95
Natural Gas	26.53	21.58	21.9	22.8	23.62	23.23	25.31
Other Fuels	1.59	1.34	1.43	1.56	1.48	1.62	1.74
Fugitive Emissions	0.88	0.89	0.89	0.89	0.89	0.9	0.9
Commercial Fuel Use	13.29	12.49	12.69	13.14	12.99	13.46	13.67
Natural Gas	11.28	104	10.5	10.9	11.06	11.13	11.55
Other Fuels	2	2.09	2.18	2.24	1.93	2.32	2.12
Commercial Cogeneration Heat Output	0.5	0.52	0.52	0.78	0.85	0.72	0.74
Other Commercial and Residential	1.4	1.41	1.42	1.43	1.44	1.44	1.45
Percent of Total Emissions	10%	9%	9%	9%	10%	10%	10%
Industrial	91.67	92.51	90.27	88.99	88.79	89.17	88.18
Refineries	29.43	29.78	28.35	29.78	30.05	30.07	28.82
General Fuel Use	19.47	19.91	19.41	19.24	18.79	18.56	19.83
Natural Gas	14.37	15.38	14.63	15.42	15.01	15.49	16.87
Other Fuels	5.1	4.53	4.78	3.82	3.78	3.07	2.96
Oil & Gas Extraction[a]	18.92	19.2	19.27	16.75	16.87	16.68	16.58
Fuel Use	16.94	17.17	17.22	14.84	14.94	14.61	14.31
Fugitive Emissions	1.98	2.03	2.05	1.91	1.93	2.08	2.27

Table IV.E-4 (Continued)
California GHG Inventory
(million metric tons CO2e)

	2013	2014	2015	2016	2017	2018	2019
Cement Plants	7.21	7.66	7.47	7.6	7.66	7.88	7.78
Clinker Production	4.47	4.78	4.69	4.67	4.85	4.96	4.92
Fuel Use	2.74	2.88	2.77	2.93	2.81	2.91	2.86
Cogeneration Heat Output	9.01	8.25	7.98	7.84	7.59	8.1	7.39
Other Process Emissions	7.64	7.69	7.8	7.78	7.83	7.87	7.79
Natural Gas Transmission & Distribution	3.82	3.87	3.94	3.99	4.01	4.02	4.09
Manufacturing	0.19	0.16	0.18	0.1	0.11	0.1	0.11
Wastewater Treatment	1.85	1.86	1.85	1.85	1.86	1.92	1.92
Other	1.78	1.79	1.82	1.84	1.85	1.83	1.67
Percent of Total Emissions	20%	21%	20%	21%	21%	21%	21%
Recycling and Waste	8.35	8.4	8.47	8.57	8.66	8.74	8.85
Landfills[b]	8.05	8.09	8.15	8.23	8.31	8.37	8.48
Composting	0.3	0.31	0.33	0.34	0.35	0.36	0.38
Percent of Total Emissions	2%	2%	2%	2%	2%	2%	2%
High Global Warming Potential	16.75	17.73	18.6	19.24	19.97	20.38	20.58
Ozone Depleting Substance Substitutes	16.38	17.42	18.32	19	19.64	20.9	20.3
Electricity Grid SF6 Losses[c]	0.29	0.17	0.14	0.1	0.18	0.14	0.14
Semiconductor Manufacturing[b]	0.08	0.14	0.14	0.14	0.15	0.15	0.14
Percent of Total Emissions	4%	4%	4%	5%	5%	5%	5%
Agriculture[d]	33.83	34.68	33.53	33.29	32.49	32.75	31.75
Livestock	22.92	23.24	22.66	22.57	22.89	22.92	22.6
Enteric Fermentation (Digestive Process)	11.22	11.28	10.95	10.93	11.14	11.13	10.97
Manure Management	11.71	11.96	11.7	11.64	11.75	11.69	11.63
Crop Growing & Harvesting	7.2	6.92	6.48	6.75	6.49	6.7	6.62
Fertilizers	5.52	5.45	4.93	5.03	5.02	5.07	5.03
Soil Preparation and Disturbances	1.59	1.39	1.47	1.63	1.38	1.54	1.49
Crop Residue Burning	0.08	0.08	0.08	0.08	0.09	0.09	0.1
General Fuel Use	3.71	4.51	4.4	3.97	3.11	3.23	2.54
Diesel	2.53	3.39	3.66	3.21	2.4	2.48	1.85
Natural Gas	0.69	0.63	0.64	0.72	0.67	0.74	0.68
Gasoline	0.49	0.49	0.1	0.04	0.05	0.01	0.01
Other Fuels	0	0	0	0	0	0	0
Percent of Total Emissions	8%	8%	8%	8%	8%	8%	8%
Total Net Emissions	447.4	443	440.7	429	424.5	425.1	418.2

[a] *Reflects emissions from combustion of fuels plus fugitive emissions.*

[b] *These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.*

Table IV.E-4 (Continued)
California GHG Inventory
(million metric tons CO2e)

	2013	2014	2015	2016	2017	2018	2019
[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 2000–2019—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of CO_2e—(based upon IPCC Fourth Assessment Report's Global Warming Potentials).							

418.2 million $MTCO_2e$, which achieves the AB 32 target of reducing statewide GHG emissions to below 1990 levels (431 million $MTCO_2e$) by 2020.

(2) Existing Project Site Emissions

The Project Site is currently developed with three buildings that include 16,222 square feet of light industrial floor area and 23,106 square feet of office and creative office floor area. In total, the three buildings comprise 39,328 square feet of floor area and accommodate an estimated 108 existing employees.[72]

Area source emissions are generated by the existing on-site uses. Energy source emissions are typically associated with building electricity and natural gas usage at the Project Site. In addition, mobile source emissions from the existing uses are generated by motor vehicle trips to and from the Project Site. Additionally, waste sources emissions are from solid waste generated at the Project Site and water source emissions are generated from water used on the Project Site. Table IV.E-5 on page IV.E-39 presents the GHG emissions associated with the existing land uses.

[72] *Based on the employee generation factors from the City of Los Angeles VMT Calculator Documentation, Version 1.3, May 2020. Specifically: 0.001 employees per square foot for the 16,222 square feet of existing light industrial floor area (16 employees); and 0.004 employees per square foot for the existing 23,106 square feet of office and creative office floor area (92 employees). 16 + 92 = 108.*

Table IV.E-5
Existing (2019) Project Site Annual GHG Emissions Summary

Scope	Metric Tons of Carbon Dioxide Equivalent[a] ($MTCO_2e$)
Area	<1
Energy	198
Mobile	321
Solid Waste	5
Water/Wastewater Generation	58
Total Emissions	582

Numbers may not add up exactly due to rounding.

[a] *CO_2e was calculated using CalEEMod Version 2020.4.0 and the results are provided in Appendix B of this Draft EIR.*

Source: Eyestone Environmental, 2021.

3. Project Impacts

a. Thresholds of Significance

(1) State CEQA Guidelines Appendix G

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

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?

CEQA Guidelines Section 15064.4 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 the 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)).[73] It is noted that 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.[74] 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.[75] 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 reduction of GHG emissions."[76] Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies, and/or other regulatory strategies to reduce GHG emissions.[77]

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[73] *See, generally, CEQA Guidelines 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.*

[74] *14 CCR § 15064(h)(3).*

[75] *14 CCR § 15064(h)(3).*

[76] *14 CCR § 15064(h)(3).*

[77] *See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance tor 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$_2$e /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*

(Footnote continued on next page)

In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project is consistent with applicable regulations or 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 most directly applicable adopted regulatory plan to reduce GHG emissions is the 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 the AB 32 *Climate Change Scoping Plan* and subsequent updates, and the Green New Deal.

(2) SCAQMD Thresholds

As discussed above, SCAQMD only has an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where SCAQMD is the lead agency. This SCAQMD interim GHG significance threshold is not applicable to the Project as the Project is a commercial project and the City of Los Angeles is the Lead Agency.

(3) 2006 L.A. CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* does not identify any factors to evaluate GHG emissions impacts. Thus, the potential for the Project to result in impacts from GHG emissions is based on the Appendix G thresholds.

For the reasons set forth above, to answer both of the above Appendix G thresholds, the City will consider whether the project is consistent with AB 32 and SB 375 (through demonstration of conformance with the 2020–2045 RTP/SCS), and the Green New Deal.

b. Methodology

Amendments to CEQA Guidelines Section 15064.4 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

Negative Declaration tor 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).

used, in addition to quantification, this section recommends certain qualitative 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 extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs).

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. In addition, neither SCAQMD, OPR, CARB, CAPCOA, nor any other state or regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment.

For information 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 are evaluated by assessing the Project's consistency with applicable statewide, regional and local GHG reduction strategies . As discussed previously, the Project will be evaluated for consistency with AB 32's 2008 Climate Change Scoping Plan and subsequent updates, SCAG's 2020–2045 RTP/SCS, and the Green New Deal.

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 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 GHG Emissions Reduction Plan as recommended in the relevant amendments to the CEQA Guidelines. However, the City has the Green New Deal and Green Building Code that encourage and require applicable projects to implement energy efficiency measures. The Green New Deal is a mayoral initiative and not an adopted plan. However, it 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 policies and regulations, the Project would result in a less than significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32, SB 32, AB 100, AB 1493, and SB 375). A consistency analysis is provided and describes the Project's compliance with or conflict with performance-based standards included in the regulations outlined in the applicable portions of the *Climate Change Scoping Plan*, 2020–2045 RTP/SCS, and the 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.

This Draft 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.[78] The Project without Reduction Features scenario does not account for energy efficiency measures that would exceed the Title 24 Building Standards Code, and does not account for trip reductions from availability of public transportation within 0.25 mile. This comparison is being done for informational purposes only, including to disclose the relative carbon efficiency of the Project. The City, as lead agency, is basing its determination of the significance of the Project's GHG emissions in relation to the Project's location and design and its consistency with State, regional, and local City of Los Angeles regulatory schemes, as explained below.

(3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG

[78] *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. See Center for Biological Diversity, et al. v. California Department of Fish and Wildlife (The Newhall Land and Farming Company, Real Party in Interest) (2015) 62 Cal. 4th 204.*

emissions from a number of general and industry-specific activities.[79] 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."[80] 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 recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. 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.
- 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).[81]

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

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

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

81 *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.*

future strategies.[82] 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."[83] 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 pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, which 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.[84]

(4) Construction

The Project's construction emissions were calculated using CalEEMod Version 2020.4.0. Details of the modeling assumptions and emission factors are provided in Appendix B of this Draft EIR. CalEEMod calculates emissions from off-road equipment

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82 *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.*

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

84 *California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod™, www.caleemod.com, accessed March 16, 2022.*

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 demolish existing buildings, remove existing pavement, grade and excavate the Project Site, construct the proposed building and related 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.[85] Thus, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(5) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential direct and indirect 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, which include landscaping, natural gas combustion (HVAC and water heaters), and architectural coating activities, are calculated 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.

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

GHG emissions associated with electricity usage 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 lb. CO_2 per MWh). LADWP's carbon intensity projections also take into account SB 100 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.

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.

Mobile source GHG emissions are calculated based on an estimate of the Project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the Project's Transportation Assessment, included as Appendix M of this Draft EIR.[86] As discussed in Section IV.K, 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 variations in trip frequency and length associated with new employee and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

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 size of 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, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the Project's land uses, the water demand factors, the electrical intensity factors for

[86] *The Mobility Group, 2159 Bay Street Project Transportation Assessment, July 2020.*

water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted.

The GHG emissions calculations for the Project include credits or reductions for implementation of relevant project design features set forth in this Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., Pavley I Standards, full implementation of California's Statewide RPS beyond current levels of renewable energy, and the California LCFS). It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. 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 characteristics (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 expected 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 the Cap-and-Trade Program were not included in this analysis. By not speculating on potential regulatory conditions, the analysis 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 proposed with regard to GHG emissions:

Project Design Feature GHG-PDF-1: The design of the new buildings will incorporate the following sustainability features:

- Incorporate energy-saving technologies and components to reduce the Project's electrical use profile. Examples of these components include the use of light emitting diode (LED) and other efficient lighting technology, energy saving lighting control systems such as light- and motion-detection controls (where applicable), and energy efficient heating, ventilation, and air conditioning (HVAC) equipment.
- HVAC mechanical systems and building lighting shall be controlled with timing systems to prevent accidental or inappropriate conditioning or lighting of unoccupied space.
- Demand control ventilation shall be utilized in HVAC systems, and refrigerants in HVAC equipment shall have low GHG emission

rates. In particular, the HVAC system shall be designed to optimize exterior and interior air-flow to ensure healthy indoor air quality.

- Incorporate energy-efficient design methods and technologies such as a centralized chiller plant with rooftop ventilation, high performance window glazing, passive design and façade shading devices, high efficiency domestic water heaters, and enhanced insulation to minimize solar heat gain.
- Use of water-efficient plantings with drought-tolerant species.
- Allocate preferred parking for alternative-fuel vehicles, low-emitting, and fuel-efficient and ride-sharing vehicles.

In addition, as part of the Project, the Applicant would incorporate project features to further support and promote environmental sustainability. The Project would comply with all applicable state and local regulatory requirements, including the provisions set forth in the City's Green Building Ordinance. 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.[87] The Project would also include water conservation features as set forth in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure.

d. Project Impacts

Would the Project:

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 described above, compliance with applicable GHG emissions reduction plans would result in a less-than-significant Project-level and cumulative impact. The following section describes the extent the Project complies with or exceeds the performance-based standards included in the regulations outlined in the *Climate Change Scoping Plan* and

[87] *City of Los Angeles Ordinance No. 186485. December 11, 2019.*

subsequent updates, the 2020–2045 RTP/SCS, and the 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 *Climate Change Scoping Plan* sets forth a range of GHG reduction actions which 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. The following discussion demonstrates how the pertinent reduction actions relate to and reduce project-related 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, 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. The following discussion demonstrates how the pertinent reduction actions relate to and reduce Project-related GHG emissions.

Project GHG emissions are quantified further below in the document. As shown in Table IV.E-11 on page IV.E-70 in the analysis further below, the Project would result in 2,849 MTCO2e annually with Project Reduction Features and Mitigation Measure TR-MM-1 which would implement a Transportation Demand Management (TDM) program to reduce vehicle trips. The breakdown of the Project's GHG emissions by source category with implementation of the proposed and required GHG reduction features shows approximately less than one percent from area sources; 35 percent from energy consumption; 56 percent from mobile sources; less than 1 percent from stationary sources; 1 percent from solid waste generation; 6 percent from water supply, treatment, and distribution; and 6 percent from construction activities. Provided in Table IV.E-6 on

page IV.E-52 is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project's design features comply with or exceed the reduction actions/strategies outlined in the *Climate Change Scoping Plan* and subsequent updates. Further evaluation of Project design features and specific applicable policies and measures in the Climate Change Scoping Plan is provided in Table IV.E-7 on page IV.E-55 in the analysis further below. As discussed therein, the Project would be consistent with the *Climate Change Scoping Plan* and subsequent updates, which is intended to reduce GHG emissions. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

Based on the analysis above and below, the Project would be consistent with the GHG reduction-related actions and strategies in the Climate Change Scoping Plan and subsequent updates.

(ii) 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 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 RTP/SCS identifies various strategies to reduce per capita VMT.

The 2020–2045 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita transportation 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 outlines 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. These strategies and policies are addressed below.

Table IV.E-6
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
Energy
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] According to LADWP, 32 percent of its electricity came from renewable resources in 2018.[b] Electricity GHG emissions provided in Table IV.E-11 on page IV.E-70 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 eight 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, 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. The electricity-related GHG emissions provided in Table IV.E-11 on page IV.E-70 conservatively do not account for the additional 13 percent reduction that would be achieved by LADWP in year 2025 prior to buildout of the Project (difference between the 47 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. **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 the Project would comply with 2019 Title 24 Standards, which represent challenging but achievable design and construction practices, and Project Design Feature GHG-PDF-1 would require the Project to implement measures to reduce overall energy usage compared to baseline conditions.
Energy Independence and Security Act of 2007 (EISA): EISA requires phasing out of incandescent light bulbs sold in the United States resulting in 25 percent greater light bulb efficiency in 2014 and 200 percent greater efficiency in 2020. CalEEMod does not incorporate this nationwide reduction in electricity usage associated with lighting. As the Project would benefit from implementation of the EISA, electricity GHG emissions provided in Table IV.E-11 on page IV.E-70 conservatively account for a 25-percent reduction in lighting electricity consumption. **Cap-and-Trade Program**: As required by AB 32 and the *Climate Change Scoping Plan*, 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.E-11 on page IV.E-70 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 usage would indirectly be covered by the Cap-and-Trade Program.
Mobile
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 zero emission vehicles manufactured in the 2018 through 2025 model years. Standards under the

Table IV.E-6 (Continued)
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
Advanced Clean Cars Program apply to all passenger and light duty trucks within California and indirectly used by employees and deliveries to the Project. Mobile source GHG emissions provided in Table IV.E-11 on page IV.E-70 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 10 percent of the total parking spaces to be equipped with electric vehicle chargers and 30 percent of the total parking spaces provided to be capable of supporting future Electric Vehicle Supply Equipment (EVSE) per City codes. 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 benefit from these measures once adopted. **Low Carbon Fuel Standard (LCFS)**: The current LCFS requires a reduction of at least 7.5 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 reduce the Project's mobile source emissions.
Solid Waste
California Integrated Waste Management Act of 1989: The regulation requires each jurisdiction's source reduction and recycling element to include a diversion of 50 percent of all solid waste by 2000.[f] **AB 341 (2011)** amended the regulation to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[g] The Project complies with these percentage recycling requirements inasmuch as the Project is served by the City of Los Angeles, which currently achieves a diversion rate of 76 percent. Project-related GHG emissions from solid waste generation provided in Table IV.E-11 on page IV.E-70 includes a 76-percent reduction in solid waste generation source emissions consistent with the minimum diversion rate required for the City of Los Angeles (CalEEMod default diversion rate is zero percent). The Applicant must also only contract for waste disposal services with a company that recycles solid waste in compliance with AB 341. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. Consistent with CalGreen requirements, the Project would recycle and/or salvage at least 65 percent of non-hazardous construction and demolition debris, and the Applicant would prepare a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled.

[a] *SB 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*

[b] *CEC, Annual Power Content Labels for 2018, LADWP, July 2019.*

[c] *CARB, Advance Clean Cars, 2017 Midterm Review Report, ww2.arb.ca.gov/resources/documents/2017-midterm-review-report, accessed October 4, 2021.*

Table IV.E-6 (Continued)
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures
[d] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks, accessed October 4, 2021.*
[e] *CARB, LCFS Regulation, ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-regulation, accessed October 4, 2021.*
[f] *California Integrated Waste Management Act of 1989 and AB 341.*
[g] *AB 341 (2011).*
Source: Eyestone Environmental, 2022.

Consistency with Integrated Growth Forecast

The 2020–2045 RTP/SCS provides 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 the 2020–2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2019 is approximately 1,878,052 employees.[88] In 2025, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have approximately 1,937,555 employees.[89] Thus, the estimated 781 net new employees resulting from the Project's 222,189 square feet of proposed office, retail and restaurant floor area would constitute approximately 1.3 percent of the employment growth forecasted between 2019 and 2025.[90,91] The Project would not include any residential uses.

Please refer to Section IV.H, Land Use, of this Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS.

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[88] *Based on a linear interpolation of 2016–2045 data.*

[89] *Based on a linear interpolation of 2016–2045 data.*

[90] *Based on the employee generation factors from the Los Angeles Department of Transportation and Los Angeles Department of City Planning, City of Los Angeles VMT Calculator Documentation, May 2020, Table 1. Specifically: 0.004 employees per square foot for the proposed 217,189 square feet of creative office floor area (869 employees); and 0.004 employees per square foot for the proposed 5,000 square feet of retail/restaurant floor area (20 employees). Gross: 869 + 20 = 889. Net: 889 – 108 = 781.*

[91] *781 ÷ 51,357 = 1.5 percent*

Table IV.E-7
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
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 as Measure E-1 and CR-1.	State and CEC	**No Conflict.** These standards are included in default parameters provided below in Table IV.E-11 on page IV.E-70 and would apply to appliances used during Project operation under both options.
CCR, Title 24, Building Standards Code: The 2022 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] The California Green Building Standards Code (Part 11, Title 24; CALGreen Code) 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.	State and CEC	**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 standards are included in default parameters provided in CalEEMod. However, the Project would be subject to 2022 Title 24 requirements which are more stringent than the 2019 Title 24 standards.
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.	State, CARB Regional, SCAG	**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 commercial, retail and restaurant uses within a SCAG-designated HQTA. In addition, the Project Site's proximity to a variety of commercial uses and services would allow residents living near the Project Site to walk to meet their shopping needs, thereby reducing VMT and GHG emissions. The Project would also provide bicycle parking spaces for Project uses in accordance with LAMC requirements. As discussed below, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 17-percent reduction in overall VMT when compared to a project without reduction features. This

Table IV.E-7 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		reduction in VMT would support the State's emissions goal (i.e., SB 375) and 2020–2045 RTP/SCS's goal of reducing VMT and related GHG emissions from passenger vehicles.
By 2019, adjust performance measures used to select and design transportation facilities. • Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g.**,** via guideline documents, funding programs, project selection, etc.). • Presented in the 2017 Update to the Scoping Plan, Table 17.	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**No Conflict.** The Project would not involve construction of transportation facilities. However, the Project Site is located in an area with a variety of public transit options provided by Los Angeles County Metropolitan Transit Authority, Red and Purple Lines Pershing Square Station and the Metro Red, Purple, Blue, and Expo Lines 7th Street/Metro Center Station. Specifically, the Project vicinity is currently served by five Metro bus routes. The Project benefits from being located near these bus routes by encouraging use of mass transit resulting in a reduction of Project-related vehicle trips to and from the Project Site.
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.	CalSTA, Caltrans, CTC, OPR/SGC, CARB	**No Conflict.** The Project would support this policy since the Applicant would provide at least 10 percent of the total parking spaces to be equipped with electric vehicle chargers and 30 percent of the total parking spaces provided to be capable of supporting future Electric Vehicle Supply Equipment (EVSE) consistent with City regulatory requirements.
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.	State	**No Conflict.** The Project would comply with applicable provisions of the 2023 Los Angeles Green Building Code (the version of the Green Building Code expected to be in place at the Project building permit stage) which in turn will require 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 2023 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.

Table IV.E-7 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
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.	State	**No Conflict.** The Project would comply with Title 24 standards, which require that rooftop areas on non-residential buildings set aside a minimum area for potential installation of solar panels at a later date. 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.
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 2008 Climate Change Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment. Presented in the 2017 Update to the Scoping Plan, Appendix H.	State	**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.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR, provides a specific list of water conservation measures and expected reductions to water consumption. Examples include high-efficiency Energy Star–rated clothes and dishwashers, drought-tolerant plants, 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.
Implement the Short-Lived Climate Pollutant Strategy by 2030: • 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	**No Conflict.** SB 605 was adopted in 2014, which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. SB 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbon emissions and 50 percent for black carbon emissions below 2013 levels.[c] 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.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and	CARB, CalRecycle,	**No Conflict.** Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible

Table IV.E-7 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
SB 1383. Presented in the 2017 Update to the Scoping Plan, Table 17.	CDFA, SWRCB, Local air districts	for achieving a 50-percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025. The SB 1383 regulations go into effect January 1, 2022.[c] The Project would not conflict with AB 341, which requires not less than 75 percent of solid waste generated be source reduced through recycling, composting, or diversion. Solid waste generated by the Project will be handled by the City of Los Angeles Sanitation Department which currently complies with AB 341. 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 and was conservatively not included in the calculation of Project GHG emissions.

CalRecycle = California Department of Resources Recycling and Recovery
CalSTA = California State Transportation Agency
Caltrans = California Department of Transportation
CARB = California Air Resources Board
CDFA = California Department of Food and Agriculture
CTC = California Transportation Commission
DOF = California Department of Finance
GoBiz = Governor's Office of Business and Economic Development
SCAG = Southern California Association of Governments
SGC = Strategic Growth Council
SWRCB = State Water Resources Control Board

[a] *CEC, Adoption Hearing, 2019 Building Energy Efficiency Standards.*

[b] *City of Los Angeles Departments of City Planning and Transportation: CEQA Transportation Analysis Update Frequently Asked Questions, August 2019. The APC area boundaries represent a land area equivalent to a medium-size California city and captures consistent travel behavior*

Table IV.E-7 (Continued)
Consistency Analysis—2008 Climate Change Scoping Plan and Subsequent Updates

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
zones and geographies in the City of Los Angeles. The South Valley APC is applicable to the Project area.		
[c] *CARB, Reducing Short-Lived Climate Pollutants in California, ww2.arb.ca.gov/our-work/programs/short-lived-climate-pollutants, accessed October 5, 2021.*		
[d] *CalRecycle, Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, www.calrecycle.ca.gov/climate/slcp/, accessed 5, 2021.*		
Source: Eyestone Environmental, 2022.		

Consistency with VMT Reduction Strategies and Policies

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. As discussed above, OPR recommends that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals. To analyze the consistency of the Project with the 2020–2045 RTP/SCS, the Project's employee Daily VMT was divided by the Project's number of employees to arrive at the Daily VMT per capita. The estimate, as provided in Table IV.E-8 on page IV.E-61, was compared to the applicable average VMT designated for the Area Planning Commission (APC) jurisdiction within which the Project is located.[92] As shown in Table IV.E-8, the Project results in a daily per capita VMT of 7.5 miles for employees, which is less than the threshold for the Central Los Angeles Area Planning commission (APC) jurisdiction of 7.6. This level of VMT per capita is consistent with OPR's recommended reduction in VMT per capita to meet the State's GHG emission reduction goals.

As shown in Appendix M of this Draft EIR, the Project design includes characteristics that would reduce trips and VMT as compared to the Project without implementation of VMT reducing measures within the Air Basin as measured by CalEEMod. 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, HQTA 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

[92] *City of Los Angeles Departments of City Planning and Transportation: CEQA Transportation Analysis Update Frequently Asked Questions, August 2019. The APC area boundaries represent a land area equivalent to a medium-size California city and captures consistent travel behavior zones and geographies in the City of Los Angeles. The Project Site is located in the Central APC.*

Table IV.E-8
Project Total VMT/Capita

Scenario	Daily Weekday Trips
Home Based Work Attraction VMT (Project)[a]	6,673 Daily VMT
Service Population[b]	889
Total VMT Per Capita[c]	7.5 VMT/Capita (Daily)
APC Average Designated for Project Area	7.6 VMT/capita

[a] *VMT was based on LADOT VMT Calculator included in the Transportation Assessment provided in Appendix B of this Draft EIR. This value represents the mitigated daily VMT for employee trips travelling from home to work, consistent with LADOT Transportation Assessment Guidelines.*

[b] *The "Service Population" includes total Project employees (889).*

[c] *Implementation of traffic mitigation measures including Transportation Demand Measures (TDM) would result in a daily VMT per capita of 7.5. Please refer to the Transportation Assessment provided in Appendix M of this Draft EIR*

Source: Eyestone Environmental, 2021.

developments.[93] 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 17-percent reduction in overall VMT and resultant GHG emissions compared to the baseline ITE trip generation rates.[94] This 17-percent reduction is reflected in the mobile source emissions number in the Project without Reduction Features column of Table IV.E-11 on page IV.E-70 in the analysis further below. Furthermore, with implementation of Mitigation Measure TR-MM-1, implementation of a TDM program, the Project would result in a 28-percent reduction in overall VMT and associated emissions. This 28-percent reduction is reflected in the mobile source emission number in the Project with Reductions Features column of Table IV.E-11. *This reduction is attributable to the Project characteristics of being an infill project near transit that supports multi-modal transportation options. It should be noted that the VMT per capita calculation is for informational purposes to demonstrate consistency with the 2020–2045 RTP/SCS.

[93] *Environmental Protection Agency, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model, accessed October 4, 2021.*

[94] *VMT Reduction is based on total Project VMT which includes employees and visitors travelling to and from the site*

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 closer to transit;
- Job growth focused in HQTAs; and
- Biking and walking infrastructure to improve active transportation options and transit access.

The Project represents an infill development within an existing urbanized area that would concentrate new office and restaurant/retail uses within a HQTA, which is defined by the 2020–2045 RTP/SCS as a generally walkable transit village or corridor that is 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.H, Land Use, of this Draft EIR for further discussion). Specifically, public transit service in the vicinity of the Project Site is currently provided by multiple local and regional bus lines, several of which provide connections to Downtown subway stations, including the Los Angeles County Metropolitan Transit Authority (Metro) Red and Purple Lines Pershing Square Station and the Metro Red, Purple, Blue, and Expo Lines 7th Street/Metro Center Station. In particular, Metro provides a bus stop for Metro Local Line 60 located at the corner of South Santa Fe Avenue and Violet Street, approximately 580 feet northwest of the Project Site. A total of two other bus lines, local lines Metro 18, and Metro 62 have stops within 0.25 mile of the Project Site. Metro Local Line 66 and Metro Rapid Line 720 currently serve the Project Site via stops located within approximately 0.5 mile along Alameda Street/7th Street, and Olympic Boulevard. Additionally, the Greyhound Bus Terminal is located northwest of the Project Site on 7th Street, which provides inter-city bus service to various locations outside of the Los Angeles area. The Project Site is also located 1.5 miles from the Metro Little Tokyo/Arts District station which is currently under construction and expected to open in fall 2022. Furthermore, the Project would provide short- and long-term bicycle parking spaces as required by the LAMC. These and other measures 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

A goal 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 focuses 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 Code-required parking spaces provided to be capable of supporting future EVSE and provide at least 10 percent of the total Code-required parking spaces provided with EV charging stations as dictated by City codes.

Energy Efficiency Strategies and Policies

A goal within 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 above, the Project will incorporate energy efficient lighting and electricity consumption in compliance with 2019 Title 24 Standards, which represent challenging but achievable design and construction practices, and which ensure that builders use the most energy efficient and energy conserving technologies and construction practices. In total, Project GHG emissions from electricity and natural gas usage would be reduced by six percent with implementation of project design features. Accordingly, the Project would be consistent with the 2020–2045 RTP/SCS energy efficiency strategies and policies.

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 potential to conflict with the 2020–2045 RTP/SCS, this Draft EIR also analyzes the Project's land use assumptions for consistency with those utilized by SCAG in the 2020–2045 RTP/SCS. 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 analyzed in Section IV.H, Land Use, of the Draft EIR. As discussed therein, the Project is consistent with the goals and principles set forth in the 2020–2045 RTP/SCS.

In summary, 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.[95] By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Therefore, the Project would be consistent with the GHG reduction-related actions and strategies contained in the 2020–2045 RTP/SCS. Overall, the Project would be consistent with the 2020–2045 RTP/SCS, which is intended to reduce GHG emissions.

(iii) Green New Deal/

As discussed above, the Green New Deal, a mayoral initiative, includes both short-term and long-term targets through the year 2050 in various topic areas, including water, renewable energy, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others. Although L.A.'s Green New Deal does not solely target GHG emissions, climate mitigation is one of eight explicit benefits that help define its strategies and goals.

The Green New Deal 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 by 5 percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. As noted above, the Sustainable City pLAn was updated in April 2019 and renamed the Green New Deal, which 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. Although the Green New Deal mainly targets GHG emissions related to City owned buildings and operations, certain reductions would also benefit the Project. Such measures include increasing renewable energy usage; reduction of per capita water usage; promotion of walking and biking to work, promotion of high-density housing close to major transportation stops; and various recycling and trash diversion goals. Table IV.E-9 on page IV.E-65 provides a discussion of the Project's consistency with applicable GHG-reducing actions from the Green New Deal. As discussed therein the Project would be consistent with the applicable goals and actions of the Green New Deal.

The Project would generally support the attainment of these targets as it is an infill development consisting of office and ground floor retail/restaurant uses within an existing urbanized area that is within 0.5 mile of a well-serviced transit stop or a transit corridor with

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

Table IV.E-9
Consistency with Applicable GHG Emissions Goals and Actions of the 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	**Consistent.** 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 2016 California Plumbing Code, 2019 California Green Building Code (CALGreen), 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code and reflects approximately a 20 percent reduction in water usage as compared to the base demand. Project-related GHG emissions from water related sources also includes implementation of Project Design Feature WAT-PDF-1 included in Section IV.L.M, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR. Such features include high-efficiency toilets and showerheads, Energy Star–rated clothes and dishwashers, drought-tolerant plants, and drip/ subsurface irrigation, among others.
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.	**Consistent.** 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 comply with 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] The Project also includes implementation of GHG-PDF-1 which contains features such as LED lighting, energy saving lighting controls, energy efficient and centralized HVAC systems.
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.	**Consistent.** 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.

Table IV.E-9 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of the Green

Action	Description	Consistency Analysis
		The Project also includes implementation of GHG-PDF-1 which contains features such as LED lighting, energy saving lighting controls, energy efficient and centralized HVAC systems.
Focus Area: Mobility and Public Transit		
Reduce VMT per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050	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 east congestion.	**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 office uses within walking distance to other retail and entertainment uses. The Project Site is located in a HQTA as designated by the 2020–2045 RTP/SCS. The Project would also provide bicycle parking spaces in accordance with LAMC requirements for Project employees and visitors.
Focus Area: Mobility and Public Transit		
Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050	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.	**No Conflict.** The Project would support this policy since the Project would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City codes.

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

Source: Eyestone Environmental, 2022.

15-minute or less service frequency during peak commute hours. Specifically, Public transit service in the vicinity of the Project Site is currently provided by multiple local and regional bus lines, several of which provide connections to Downtown subway stations, including the Los Angeles County Metropolitan Transit Authority (Metro) B and D (Red and Purple) Lines Pershing Square Station and the Metro B, D, A, and E (Red, Purple, Blue, and Expo) Lines 7th Street/Metro Center station. In particular, Metro provides a bus stop for Metro Local Line 60 located at the corner of South Santa Fe Avenue and Violet Street, approximately 580 feet northwest of the Project Site. A total of two other bus lines, local

lines Metro 18, and Metro 62 have stops within 0.25 mile of the Project Site. Metro Local Line 66 and Metro Rapid Line 720 currently serve the Project Site via stops located within approximately 0.5 mile along Alameda Street/7th Street, and Olympic Boulevard. Additionally, the Greyhound Bus Terminal is located northwest of the Project Site on 7th Street, which provides inter-city bus service to various locations outside of the Los Angeles area. The Project Site is also located approximately 1.5 miles from the Metro L Line (formerly Gold Line) Little Tokyo/Arts District station, currently under construction and forecast to open in fall 2022. Furthermore, the Project would comply with 2019 Title 24 Standards, which represent challenging but achievable design and construction practices, and would implement various project design features to reduce energy usage, including Project Design Feature GHG-PDF-1 and Project Design Feature WAT-PDF-1. Furthermore, the Project 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 targets included in the Green New Deal with regard to energy-efficient buildings and waste and landfills. The Project would also provide secure short- and long-term bicycle storage areas and EV parking for Project employees and guests.

Therefore, the Project would be consistent with the Green New Deal. Therefore, impacts pertaining to consistency with the Green New Deal would be less than significant.

(iv) Conclusion

Based on the above, because the Project's location, land use characteristics and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations, and with the City's Green Building Code and the Green New Deal, the Project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions and its impacts would be less than significant.

(b) Project Emissions

As discussed above, CEQA Guidelines Section 15064.4 recommends quantification of a Project's GHG emissions. However, the quantification is being done for informational purposes only and Project GHG emissions are not evaluated against any numeric threshold. 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 (natural gas and electricity) 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 Emissions

As described in Section II, Project Description, of this Draft EIR, the timing of construction of specific elements of the Project would depend on the business needs at the time. Project construction could occur in sequential phases (e.g. demolition, then grading, then building construction), with construction finishing in 2025. Construction activities would include demolition of existing uses, grading and excavation, mat foundation pouring, construction of new structures and related infrastructure. Approximately 140,000 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil would be hauled from the Project Site during excavation. 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.E-10 on page IV.E-69.

As presented in Table IV.E-10, construction of the Project is estimated to generate a total of 5,245 $MTCO_2e$. 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

Table IV.E-10
Construction-Related Emissions
(MTCO2e)

Year	$MTCO_2e$[a]
2023	2,186
2024	1,498
2025	997
Total	**4,681**
Amortized Over 30 Years	156

[a] *CO_2e was calculated using CalEEMod and the results are provided in Appendix B of this Draft EIR. Totals may not add up due to rounding.*

Source: Eyestone Environmental, 2022.

Project's annual GHG emissions inventory.[96] This results in annual Project construction emissions of 156 $MTCO_2e$. 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. As shown in Table IV.E-11 on page IV.E-70, the Project, at full buildout, is expected to result in less than one $MTCO_2e$ per year from area sources when accounting for removal of the existing on-site uses. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

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 petroleum based fuel emits CO_2 and other GHGs directly into the atmosphere; when this occurs in a building or property, it is a direct emission source associated with that building or property. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in

[96] *SCAQMD Governing Board Agenda Item 31, December 5, 2008.*

Table IV.E-11
Annual GHG Emissions Summary (Buildout less Baseline)[a]
(metric tons of carbon dioxide equivalent [$MTCO_2e$])

Scope	Project Without Reduction Features	Project With Reduction Features	Reduction[b]
Area[c]	<1	<1	0%
Energy[d]	1,074	1,013	-6%
Mobile[e]	2,324	1,606	-31%
EV Charger Credit[e]	(116)	(116)	
Stationary[f]	1	1	0%
Solid Waste[g]	19	19	0%
Water/Wastewater[h]	170	170	0%
Construction	156	156	0%
Total Emissions	**3,628**	**2,849**	**-21%**

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Draft EIR. Totals may not add up due to rounding.*

[b] *Certain GHG reduction features and regulations discussed above in the regulatory 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 for the Project buildout year, emissions do not reflect more stringent standards for later years. Therefore, the Project emissions presented herein are conservative and would be lower in future years. Project without Reduction Features does not include MXD adjustments for vehicle trips or mitigation measure TDM-MM-1, but does include regulatory measures such as RPS, LCFS, and Title 24 consistency. Project with Reduction Features includes project design feature GHG-PDF-1 and mitigation measure TDM-MM-1*

[c] *Area source emissions are from the use of landscape equipment*

[d] *Energy source emissions are based on CalEEMod default electricity and natural gas usage rates. GHG emissions account for compliance with 2019 Title 24 standards. Emissions from electricity generation only take into account 2022 Title 24 requirements and carbon intensity at the build out year, but do not take into account decreasing carbon intensity required by SB 350 and SB 100 (RPS). However, it is recognized that the RPS would require utilities to supply 60 percent renewable energy by 2030 per SB 100. 2022 Title 24 would be more stringent than 2019 Title 24 requirements.*

[e] *Assumes compliance with LCFS for both the Project and the Project without Reduction Features. Mobile source emissions do not account for increasing fuel economy standards for future years. Project-related mobile source emissions also take into account EV charging requirements, which would provide for ten percent of code-required parking being equipped with EV charging stations.*

[f] *Stationary source emissions are from an on-site emergency generator.*

[g] *Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.*

[h] *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, as well as compliance with Project Design Feature WAT-PDF-1 which are reflected in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.*

Source: Eyestone Environmental, 2022.

a building, the electricity generation typically takes place off-site at the power plant; accordingly, 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 for year 2025. LADWP's carbon intensity projections also take into account SB 350 and 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 plug-in appliances. CalEEMod calculates energy use from systems covered by 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.[97] The data are specific for climate zones. Zone 12 was selected for the Project Site based on the zip code tool. Since these studies are based on older buildings, adjustments have been made to CalEEMod default energy use assumptions to account for changes to 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, 2013 and 2016 to incorporate increasing energy efficiency standards percent.

As discussed above, the Project would be subject to the 2022 Title 24 standards. The 2022 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. Multifamily uses greater than three stories would be required to comply with Title 24 standards for nonresidential buildings. While the analysis accounts for current energy efficiency regulations, future and

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

proposed regulations have not been taken into account. As CalEEMod is based on 2019 Title 24 standards, this analysis conservatively does not take into account additional energy usage reductions under 2022 Title 24. Future iterations of Title 24 are expected to increase energy efficiency requirements and the Project would be required to comply with the latest Title 24 standards. 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 reduce overall energy usage such as use of LED lighting and efficient HVAC systems.

As shown in Table IV.E-11 on page IV.E-70, Project GHG emissions from electricity and natural gas usage would result in a total of 1,013 $MTCO_2e$ per year and accounts for a 6-percent reduction in energy source emissions with implementation of Project Design Feature GHG-PDF-1 as compared to the Project without implementation of this project design feature. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

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 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 CalEEMod based on the Project VMT provided in the Transportation Assessment prepared for the Project and included as Appendix M of this Draft EIR.[98] As discussed in Section IV.K, 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 office and 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 air quality model (i.e., CalEEMod).

[98] *The Mobility Group, 2159 Bay Street Project Transportation Assessment, July 2020.*

The Project represents an infill development within an existing urbanized area that would concentrate new office and restaurant/retail uses within an HQTA, which is defined by the 2020–2045 RTP/SCS as a generally walkable transit village or corridor that is 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.H, Land Use, of this Draft EIR for further discussion). Specifically, three Metro bus routes run within 0.25 mile of the Project Site (Lines 18, 60 and 62), while two additional Metro lines run within 0.5 mile of the Project Site (i.e., Lines 66 and 720). The Project Site is also located 1.5 miles from the Metro L Line (formerly Gold Line) Little Tokyo/Arts District station, currently under construction, and which is expected to open for service in 2022.

As shown in Table IV.E-11 on page IV.E-70, Project GHG emissions from mobile sources would result in a total of 1,606 $MTCO_2e$ per year, which accounts for a 31 percent reduction in mobile source emissions with implementation of VMT reducing measures as compared to the Project without implementation of VMT reducing measures. Project-related mobile source emissions also take into account credits for City code required EV charging spaces, which would provide for 10 percent of Code-required parking being equipped with EV charging stations. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

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). Such GHG reduction measures discussed above include increased use of LCFS and further electrification of the mobile fleet. 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.[99] Nonetheless, the Project would comply with and support the goals of achieving Carbon Neutrality by 2045, as well as the GHG emission reduction goals in 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 that would be tested and used infrequently. As shown in Table IV.E-11, the Project scenario is expected to result in one $MTCO_2e$ per year from stationary sources.

[99] *State of California, Executive Order N-79-20, September 23, 2020.*

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. As shown in Table IV.E-11 on page IV.E-70, Project GHG emissions from solid waste generation would result in a total of 19 $MTCO_2e$ per year which accounts for a 76 percent reduction in solid waste generation emissions due to the City's recycling/diversion rate of 76 percent.[100]

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 2 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 and not accounted for in the Project's GHG emissions inventory. Nonetheless, as discussed above, the Project would support and not conflict with GHG reduction measures to achieve the goals of Executive Order B-55-18, AB 32 and SB 32.

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and 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 by the City 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 factor[101] to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of

[100] *City of Los Angeles, L.A.'s Green New Deal, Sustainable City Plan, 2019; City of Los Angeles Bureau of Sanitation, Zero Waste Progress Report, 2013.*

[101] *The intensity factor reflects the average pounds of CO_2e per megawatt generated by a utility company.*

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 code, 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code and reflects approximately a 20 percent reduction as compared to the base demand.[102]

The Project's GHG emissions inventory does not take into account future water conservation measures. Recently enacted legislation includes 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.[103] Nonetheless, as discussed above, the Project would support and not conflict with GHG reduction measures to achieve the goals of Executive Order B-55-18, AB 32 and SB 32.

As shown in Table IV.E-11 on page IV.E-70, Project GHG emissions from water/wastewater usage would result in a total of 177 $MTCO_2e$ per year, which takes into account a 20 percent reduction in water/wastewater emissions as required by the Los Angeles Green Building Code and with implementation of Project Design Feature WAT-PDF-1 included in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.

(iii) Combined Construction and Operational Impacts

As shown in Table IV.E-11, when taking into consideration implementation of project design features provided throughout this Draft EIR, including the requirements set forth in the City of Los Angeles Green Building Code and the full implementation of current state mandates, the GHG emissions for the Project in 2025 would equal 156 $MTCO_2e$ per year (amortized over 30 years) during construction and 2,693 $MTCO_2e$ per year during operation of the Project with a combined total of 2,849 $MTCO_2e$ per year. It should be noted that Project-related GHG emissions presented above are provided for informational purposes as numeric thresholds have not yet been formally adopted as a threshold of significance for CEQA evaluations that would be applicable to the Project.

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[102] *Baseline water usage is calculated according to LAMC Table 99.04.303.4.1 contained in the Los Angeles Green Building Code.*

[103] *California Department of Water Resources. Fast Facts on the Water Conservation Legislation.*

The emissions inventory and analysis demonstrate that the Project incorporates GHG-reducing measures. In addition, the Project's GHG emissions inventory does not take into account future regulations and legislation to reduce GHG emissions to achieve the goals of B-55-18. Nonetheless, as described above, the Project would support and not conflict with GHG reduction measures in Executive Order B-55-18, AB 32 and SB 32 to achieve Carbon Neutrality by 2045.

(iv) Post-2030 Analysis

Recent 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 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[104] 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.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require the State board to ensure 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, increasing the use of electric vehicles, improving energy efficiency and reducing water usage.

Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project will be consistent with post-2020 GHG reduction goals. The 2020–2045 RTP/SCS would result in an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035.

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[104] *Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). 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 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. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

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. Specifically, the Project is an office project with ground floor retail/restaurant located within a TPA and HQTA in close proximity to multiple public transit options. As discussed above, the Project achieves a reduction in daily miles per capita for employees consistent with OPR's recommended reduction to support the State's emissions goals (i.e., SB 375 goal). This reduction in VMT would further support the SCAG and CARB goals of reducing GHG emissions by 19 percent per capita from passenger vehicles by 2035 in the 2020–2045 RTP/SCS. 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.-MM-

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 shown in Table IV.E-6 on page IV.E-52. 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 the Cap-and-Trade Program 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 City or the Project's control. Therefore, any evaluation of post-2030 Project GHG emissions would be speculative.

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 net emissions level (2,868 metric tons of CO_2e per year with reduction features) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table IV.E-11 and 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. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's 2016–2040 RTP/SCS and 2020–2045 RTP/SCS demonstrates that the Project will be consistent with the post-2030 GHG reduction goals.

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."[105] In the First Update to the Scoping Plan, 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."[106]

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 to decline as the regulatory initiatives identified by CARB in the Climate Change Scoping Plan are implemented, and other technological innovations occur. The Project's total emissions at build-out presented in Table IV.E-11 on page IV.E-70 in the analysis above, represents the emissions inventory for the Project. That inventory takes into account existing regulations, and regulations that would apply to the Project at its build out year. Refer to Table IV.E-6 and Table IV.E-7 on pages IV.E-52 and IV.E-55, respectively, for applicable regulatory measures that would serve to reduce GHG impacts from the Project. As such, the Project is consistent with the Executive Order's horizon-year (2050) goal.

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.

(v) 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.

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

[106] *CARB, 2017 Scoping Plan Update, November 2017, p. 18.*

Also discussed above, CARB has released a study evaluating 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.E-12 on page IV.E-80 provides a summary of key emission reduction strategies required to achieve Carbon Neutrality by 2045. In addition, Table IV.E-12 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 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.

(c) Conclusion

In summary, because the Project's location, land use characteristics and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations, and with the City's Green Building Code and the Green New Deal, the Project would not conflict with any applicable plan, policy, regulation or recommendation to reduce GHG emissions and its impacts would be less than significant. More specifically, the plan consistency analysis provided above demonstrates that the Project's location, land use characteristics and design render it consistent with the plans, policies, regulations and GHG reduction actions/strategies outlined in the *Climate Change Scoping Plan* and subsequent updates, the 2020–2045 RTP/SCS, and the Green New Deal. 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.**

Table IV.E-12
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.** 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 and 30 percent of the total parking spaces provided to be capable of supporting future Electric Vehicle Supply Equipment (EVSE).
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	**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

Table IV.E-12 (Continued)
Project Consistency with 2045 Carbon Neutrality Goals

Sector	Description	Consistency Analysis
	by 75 percent. Percent reductions are relative to Year 2020.	solid waste within the City 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.

Source: CARB, Achieving Carbon Neutrality in California, Table 1. October 2020; Eyestone Environmental, 2021.

(2) Mitigation Measures

Project-level impacts related to GHG emissions would be less than significant and 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.E-11 on page IV.E-70 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 *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. In addition, the Project would be consistent with regional growth forecasts which provide the basis of the 2016 AQMP. Furthermore, the Project would generally comply with the targets of the Green New Deal, which includes specific targets related to development, mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to GHG emissions and its 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 and 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.