

4.0 Environmental Impact Analysis

4.6 Greenhouse Gas Emissions

4.6.1 Introduction

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

4.6.2 Environmental Setting

Climate change refers to any significant change in the measures of climate lasting for an extended period of time, including major changes in temperature, precipitation, or wind patterns, among other effects that occur over several decades. Global warming, one aspect of climate change, refers to the recent and ongoing rise in global average temperature near Earth's surface. Both human and natural factors influence Earth's climate; however, rigorous analysis of all data and lines of evidence shows that most observed global warming over the past 50 years or so cannot be explained by natural causes alone; there is a significant role for the influence of human activities. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The effect of GHG emissions, particularly carbon dioxide (CO₂), on our climate has been extensively studied for decades. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature. The natural warming influence of GHGs is known as the greenhouse effect.

The greenhouse effect is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. Since the onset of the Industrial Revolution, human activities, especially burning coal and oil for fuel, have increased the abundance of heat-trapping gases in the atmosphere and have amplified the greenhouse effect.

As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO₂)

concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.¹ Global increases in CO₂ concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO₂ GHG, these have also increased significantly since 1900.² In particular, studies have concluded that it is very likely that the observed increase in methane (CH₄) concentration is predominantly due to agriculture and fossil fuel use.³

Worldwide anthropogenic emissions of GHGs were approximately 49,000 million metric tons (MMT) of CO_{2e} in 2010.⁴ CO₂ emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO₂ was the most abundant, accounting for over 75 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases accounted for 6 percent and 2 percent respectively.⁵

Total United States (U.S.) GHG emissions were 6,676.6 MMT of CO_{2e} in 2018. Emissions increased by 2.9 percent from 2017 to 2018, and since 1990, total U.S. emissions have increased by an average annual rate of 0.13 percent for a total increase of 3.7 percent between 1990 and 2018. The increase from 2017 to 2018 was primarily driven by increased fossil fuel combustion as a result of multiple factors, including increased energy usage from greater heating and cooling needs due to a colder winter and hotter summer in 2018, as compared to 2017. In 2018, the transportation and industrial end-use sectors accounted for 36 percent and 26 percent, respectively, of nationwide GHG emissions while the residential and commercial end-use sectors accounted for 20 percent and 17 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors.⁶

¹ C. Le Quéré, et al., *Global Carbon Budget 2014*, (*Earth System Science Data*, 2015, doi:10.5194/essd-7-47-2015).

² USEPA, *Global Greenhouse Gas Emissions Data*, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed October 20, 2020.

³ USEPA, *Atmospheric Concentrations of Greenhouse Gas*, updated June 2015.

⁴ IPCC, *Climate Change 2014 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change 2014*.

⁵ IPCC, *Climate Change 2014 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change 2014*.

⁶ USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018*. U. S. EPA #430-R-20-002. April 2020. www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018, accessed June 2021.

The establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

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

In December 2015, the US entered into the Paris Agreement which has a goal of keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and limit the temperature increase further to 1.5 degrees Celsius. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals. In November 2020, the US withdrew from the agreement; however, on January 20, 2021, President Biden issued an executive order to have the U.S. rejoin the agreement with entry into force on February 19, 2021.⁷

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), “Global warming poses a serious threat to the economic well-being, public health and natural environment in Southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea levels, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases.” The SCAG region, with close to half of the State’s population and economic activities, is a major contributor within the State to global warming.⁸

4.6.2.1 GHG Background

GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).⁹ CO₂ is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential than CO₂. Thus, emissions of other GHGs are

⁷ *The White House, Paris Climate Agreement, www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/, accessed June 2021.*

⁸ *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

⁹ *As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.*

frequently expressed in the equivalent mass of CO₂, denoted as CO₂e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the aforementioned GHGs is provided in Table 4.6-1 on page 4.6-5.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO₂. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. A summary of the atmospheric lifetime¹⁰ and GWP of selected gases is presented in Table 4.6-2 on page 4.6-6. As indicated below, GWPs range from 1 to 22,800.

4.6.2.2 Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.¹¹ These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion into freshwater zones of aquifers, resulting in groundwater contamination;
- The Sierra snowpack would decline between 70 and 90 percent by the end of the century, threatening California's water supply;
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier, which would affect tree survival and growth;

¹⁰ Atmospheric lifetime is defined as the time required to turn over the global atmospheric burden. Source: Intergovernmental Panel on Climate Change, *IPCC Third Assessment Report: Climate Change 2001 (TAR), Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, p. 247.*

¹¹ State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, <https://oag.ca.gov/environment/impact>, accessed October 20, 2020.

**Table 4.6-1
Description of Identified GHGs^a**

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

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

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

**Table 4.6-2
Atmospheric Lifetimes and Global Warming Potentials**

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

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

Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials, www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html, accessed October 20, 2020.

- 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; and
- Global warming can cause drought, warmer temperatures and saltwater contamination resulting in impacts to California's agricultural industry.

According to California's Fourth Climate Change Assessment, statewide temperatures from 1986 to 2016 were approximately 0.1 to 3.1°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year,

more large forest fires, and more drought years.¹² While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

4.6.2.2.1 Air Quality

Scientists project that the annual average maximum daily temperatures in California could rise by 2.5 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century. Since 1896, the top five warmest years in the Los Angeles region (in terms of annual average temperature) have all occurred since 2012.¹³ Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, increased temperatures tend to correspond to greater frequency and larger extent of wildfires, which can result in air quality impacts. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains. In southern California, the average size of summertime non-Santa Ana based fires has significantly increased from 1,129 hectares in the 1960s to 2,121 hectares in the 2000s.¹⁴ If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, and may effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them.¹⁵

4.6.2.2.2 Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in

¹² *State of California, California's Fourth Climate Change Assessment Statewide Summary Report, August 27, 2018, www.climateassessment.ca.gov/state/, accessed June 2021.*

¹³ *Ibid.*

¹⁴ *State of California, California's Fourth Climate Change Assessment Statewide Summary Report, August 27, 2018, www.climateassessment.ca.gov/state/, accessed June 2021.*

¹⁵ *California Natural Resources Agency, 2009 California Climate Adaptation Strategy, March 2009, http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf, accessed June 2021.*

California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common.¹⁶ This trend of increased dry and wet extremes is expected to increase in the future across most of the Los Angeles region.¹⁷ The uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts.¹⁸ The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the proportion of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack. Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050.¹⁹

4.6.2.2.3 Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding. The number of atmospheric rivers (regions of high water vapor transport from the tropics to the Pacific Coast that produce intense topographic-induced precipitation along southern California mountain ranges) is expected to increase in the future, resulting in an extended flood hazard season.²⁰ Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.3 millimeters per year, double the twentieth century trend of

¹⁶ *California Department of Water Resources, Indicators of Climate Change in California, May 2018, <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>, accessed June 2021.*

¹⁷ *State of California, California's Fourth Climate Change Assessment Statewide Summary Report, August 27, 2018, www.climateassessment.ca.gov/state/, accessed June 2021.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ *Ibid.*

1.6 millimeters per year.^{21,22} Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880.²³ Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The 2018 IPCC report predicts a mean sea level rise of 0.25 to 0.94 meter by 2100 with 1.5 degree Celsius of warming.²⁴ Additionally, considering that scientific consensus on the magnitude of sea level rise projections is constantly evolving, California's Fourth Climate Change Assessment characterized changes in sea level by distinct increments and not by specific time periods, with sea level rise ranging from zero meters to 2 meters in 0.5-meter increments plus an additional 5-meter extreme.²⁵ A rise in sea levels of 2 meters could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events.²⁶ This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure.²⁷ Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events. In the Los Angeles region, the effects of sea level rise on the coastline is expected to be compounded by the impacts of wave events during coastal storms because much of the coastline is comprised of wide sandy beaches.²⁸

4.6.2.2.4 Agriculture

California has an over \$50 billion annual agricultural industry (\$171 million of which is from Los Angeles County) that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture

²¹ World Meteorological Organization, *A summary of current and climate change findings and figures: a WMO information note, March 2013*, https://library.wmo.int/opac/index.php?lvl=notice_display&id=15892#.Wt9-Z8gvzIU, accessed June 2021.

²² National Aeronautics and Space Administration, *Global Climate Change—Vital Signs of the Planet—Sea Level, 2020*, <https://climate.nasa.gov/vital-signs/sea-level/>, accessed June 2021.

²³ *Ibid.*

²⁴ Intergovernmental Panel on Climate Change, *Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, 2018*, www.ipcc.ch/sr15/, accessed June 2021.

²⁵ California Natural Resources Agency, *Assessing and Communicating the Impacts of Climate Change on the Southern California Coast: A Report for California's Fourth Climate Change Assessment*, p. 4.

²⁶ California Natural Resources Agency, *Assessing and Communicating the Impacts of Climate Change on the Southern California Coast: A Report for California's Fourth Climate Change Assessment*, p. 45.

²⁷ State of California, *California's Fourth Climate Change Assessment Statewide Summary Report, August 27, 2018*, www.climateassessment.ca.gov/state/, accessed June 2021.

²⁸ *Ibid.*

2019). Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production would increase water demand as hotter conditions lead to the loss of soil moisture and could experience water shortages of up to 16 percent. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks.²⁹ Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality.³⁰

4.6.2.2.5 Ecosystems and Wildlife

Climate change and the potential resultant changes in weather patterns could have ecological effects on global and local scales. Soil moisture is likely to decline in many regions as a result of higher temperatures and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage.^{31, 32}

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO₂; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (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.³³

²⁹ *Ibid.*

³⁰ California Climate Change Center, *Climate Scenarios for California*, 2006.

³¹ C. Parmesan, *Ecological and Evolutionary Responses to Recent Climate Change*, August 2006.

³² State of California, *California's Fourth Climate Change Assessment Statewide Summary Report*, August 27, 2018, www.climateassessment.ca.gov/state/, accessed June 2021.

³³ 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.

4.6.2.3 Regulatory Framework

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

4.6.2.3.1 Federal

4.6.2.3.1.1 Federal Clean Air Act

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

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs “are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes.” The USEPA further found that “atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act.” The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.³⁴ While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA.

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

³⁴ USEPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule*, www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed October 20, 2020.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations, Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that were not previously regulated at the federal level.³⁵

4.6.2.3.1.2 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 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which found that the model year 2022–2025 GHG standards are not appropriate and should be revised.³⁶ On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California’s waiver under the Clean Air Act to establish more stringent

³⁵ USEPA, *2012 Final Rules for Oil and Natural Gas Industry, April 17, 2012*, www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/2012-final-rules-oil-and-natural-gas-industry, accessed October 20, 2020.

³⁶ *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles*, www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty, accessed October 20, 2020.

standards.³⁷ On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.³⁸ The withdrawal of the waiver became effective November 26, 2019. Pursuant to President Biden's Executive Order 13990, on April 28, 2021, the EPA sought public input on its reconsideration of the withdrawal of California's waiver.³⁹ In response, several states including California have filed a lawsuit challenging the withdrawal of the EPA waiver.⁴⁰ As of March 2021, that lawsuit was stayed pending resolution of related litigation.⁴¹

On August 2, 2018, USEPA and NHTSA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule to amend the existing CAFE and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026.⁴² On March 31, 2020, USEPA and NHTSA issued the SAFE Vehicles Rule, setting fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026.⁴³

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.⁴⁴

³⁷ *Regulations, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*, www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule, accessed October 20, 2020.

³⁸ *84 Federal Register 51310*.

³⁹ *86 Federal Register 22421 (April 28, 2021)*.

⁴⁰ *United States District Court for the District Court of Columbia, State of California v. Chao, Case 1:19-cv-02826, 2019*.

⁴¹ *United States District Court for the District of Columbia, Union of Concerned Scientists v. NHTSA, Case 1:19-cv-1230, 2019*.

⁴² *Federal Register, Notice of Proposed Rulemaking, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*, www.federalregister.gov/documents/2020/04/30/2020-06967/the-safer-affordable-fuel-efficient-safe-vehicles-rule-for-model-years-2021-2026-passenger-cars-and, accessed October 20, 2020.

⁴³ *Federal Register, Final Rule, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*.

⁴⁴ *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

In August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about \$170 billion.⁴⁵

4.6.2.3.1.3 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; and
- 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.

Additional provisions of EISA address energy savings in government and public institutions and the promotion of research on alternative energy and carbon capture, international energy programs, and the creation of “green jobs,” including through the provision of funding.⁴⁶

4.6.2.3.2 State

4.6.2.3.2.1 Executive Orders S-3-05, B-30-15, and B-55-18

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

⁴⁵ 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.

⁴⁶ *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.*

Governor's GHG emission reduction targets. The statewide GHG targets established by Executive Order S-3-05 are as follows:

- By 2010, reduce to 2000 emission levels;⁴⁷
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Brown in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below two degrees Celsius.⁴⁸

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

Executive Order B-55-18, issued by Governor Brown on September 10, 2018, established an additional statewide policy goal to achieve carbon neutrality as soon as possible and no later than 2045 and to achieve and maintain net negative emissions thereafter. The Executive Order states that this new goal is in addition to the prior statewide targets for reduction of GHG emissions.

As a result of Executive Order S-3-05, the California Climate Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under the Executive Order. The CAT, in a March 2006 report titled the "Climate Action Team Report to Governor Schwarzenegger and the Legislature" (California

⁴⁷ *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., "Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?," July 3, 2013.*

⁴⁸ *CARB, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

CAT Report) reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.⁴⁹

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, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. “Intelligent transportation systems” is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.⁵⁰

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

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

- By 2010, reduce to 2000 GHG emission levels;⁵¹ and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that the 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.⁵²

⁴⁹ CalEPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006.

⁵⁰ CalEPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006, p. 58.

⁵¹ *The 2010 target to reduce GHG emissions to 2000 levels was not met. Source: Rubin, Thomas A., “Does California Really Need Major Land Use and Transportation Changes to Meet Greenhouse Gas Emissions Targets?,” July 3, 2013.*

⁵² *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-* (Footnote continued on next page)

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

4.6.2.3.2.3 Climate Change Scoping Plan

In 2008, CARB approved the *Climate Change Scoping Plan* (referred to herein as the 2008 *Climate Change Scoping Plan*), as required by AB 32.⁵³ Subsequently, CARB approved updates to the *Climate Change Scoping Plan* in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32.

The 2008 *Climate Change Scoping Plan* proposed a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.”⁵⁴ The 2008 *Climate Change Scoping Plan* identified a range of GHG reduction actions which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The 2008 *Climate Change Scoping Plan* called for a “coordinated set of solutions” to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land 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.⁵⁵ Additionally, the

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.

⁵³ *Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.*

⁵⁴ *CARB, Climate Change Scoping Plan, December 2008.*

⁵⁵ *For a discussion of Renewables Portfolio Standard, refer to subsection 2(f)i, California Renewables Portfolio Standard.*

2008 *Climate Change Scoping Plan* emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through “improving energy efficiency by 25 percent.”

The 2008 *Climate Change Scoping Plan* identified a number of specific issues, including the following that are relevant to the Project:

- 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 to attain related reductions in electricity usage. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The 2008 *Climate Change Scoping Plan* noted that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.
- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California has to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the “business-as-usual” or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 *Climate Change Scoping Plan*. For example, in further explaining CARB’s BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the 2008 *Climate Change Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of

approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).⁵⁶

Subsequent to adoption of the 2008 *Climate Change Scoping Plan*, a lawsuit was filed challenging CARB's approval of the *Climate Change Scoping Plan Functional Equivalent Document (FED to the Climate Change Scoping Plan)*. On May 20, 2011 (Case No. CPF-09-509562), the Court found that the environmental analysis of the alternatives in the *FED to the Climate Change Scoping Plan* was not sufficient under the California Environmental Quality Act (CEQA).⁵⁷ CARB staff prepared a revised and expanded environmental analysis of the alternatives, and the *Supplemental FED to the Climate Change Scoping Plan* was approved on August 24, 2011 (Supplemental FED). The Supplemental FED indicated that there is the potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the *Climate Change Scoping Plan*.

As part of the Supplemental FED, CARB updated the projected 2020 BAU emissions inventory based on then current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the State's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuel Standard.⁵⁸ In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent Renewable Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.^{59,60}

⁵⁶ CARB, *Climate Change Scoping Plan*, p. 12, December 2008.

⁵⁷ *Association of Irrigated Residents v. CARB*, No. A1322165 (Cal. 1st Dist, Ct. App., June 19, 2012).

⁵⁸ *Pavley I* are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. *Pavley I* could potentially result in 27.7 million metric tons CO₂e reduction in 2020. *Pavley II* will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO₂e.

⁵⁹ CARB, *Supplement to the AB 32 Scoping Plan FED*, Table 1.2-2.

In 2014, CARB adopted the First Update.⁶¹ The stated purpose of the First Update was to “highlight... California’s success to date in reducing its GHG emissions and lay... the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.”⁶² 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.⁶³

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.”⁶⁴ 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.”⁶⁵ 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

⁶⁰ *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO₂e under 2020 BAU and a required reduction of 169 million metric tons CO₂e (28.4 percent).*

⁶¹ *Health & Safety Code Section 38561(h) requires CARB to update the Scoping Plan every five years.*

⁶² *CARB, First Update, May 2014, p. 4.*

⁶³ *CARB, First Update, May 2014, p. 34.*

⁶⁴ *CARB, First Update, May 2014, p. 6.*

⁶⁵ *CARB, First Update, May 2014, p. 32.*

(CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target. The 2017 Update builds upon the successful framework established by the 2008 Climate Change Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constrains and reduces emissions at covered sources.⁶⁶

4.6.2.3.2.4 Assembly Bill 197

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

4.6.2.3.2.5 Cap-and-Trade Program

The 2008 *Climate Change Scoping Plan* identified a Cap-and-Trade Program as one of the strategies for California to reduce GHG emissions. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a Cap-and-Trade Program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020.⁶⁷ CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 and the State Legislature extended the Program through 2030 with the adoption of Assembly Bill 398.

⁶⁶ CARB, *2017 Update*, November 2017, p. 6.

⁶⁷ *With continuation of the Cap-and-Trade Program, the State can achieve a 40-percent reduction target by 2030.*

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

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender an allowance for each metric ton CO₂e of GHG they emit.

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

The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.⁶⁸

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

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California’s direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program

⁶⁸ CARB, *First Update*, May 2014, p. 86.

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

The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the “capped sectors.” Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.⁶⁹ [...]

[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.⁷⁰

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

The Cap-and-Trade Program covers approximately 85 percent of California's GHG emissions.⁷¹ The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large

⁶⁹ CARB, *First Update*, May 2014, p. 88.

⁷⁰ CARB, *First Update*, May 2014, pp. 86–87.

⁷¹ Center for Climate and Energy Solutions, *California Cap-and-Trade*, www.c2es.org/content/california-cap-and-trade/, accessed October 20, 2020.

sources in the Program's first compliance period.⁷² Furthermore, the Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle miles traveled (VMT) indirectly are covered by 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 the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

4.6.2.3.2.6 Energy-Related Sources

4.6.2.3.2.6.1 California Renewables Portfolio Standard

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

In 2020, Southern California Edison indicated that 48 percent of its electricity came from renewable resources in year 2019.⁷³ Therefore, Southern California Edison complied with the requirements of SB 2X by obtaining at least 33 percent of electricity from renewable resources by 2020.

4.6.2.3.2.6.2 Senate Bill 350

The Clean Energy and Pollution Reduction Act of 2015 was enacted on October 7, 2015, as SB 350. The objectives of SB 350 are: (1) to increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources by 2030; and (2) to

⁷² *While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015.*

⁷³ *Edison International, 2019 Sustainability Report.*

double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.⁷⁴

4.6.2.3.2.6.3 Senate Bill 100

The 100 Percent Clean Energy Act of 2018 was enacted on September 10, 2018, as SB 100. The Clean Energy Act accelerates the RPS Program goals as follows: (1) 50-percent renewable resources target by December 31, 2026; and (2) 60-percent renewable resources target by December 31, 2030. This Act also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. Finally, the Clean Energy Act establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

4.6.2.3.2.6.4 Senate Bill 1368

SB 1368, enacted on 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. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO₂ per MWh. Furthermore, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO₂ per MWh (see CEC Order No. 07-523-7).

4.6.2.3.2.7 Mobile Sources

4.6.2.3.2.7.1 Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve “the maximum feasible reduction of greenhouse gases” emitted by noncommercial

⁷⁴ *Senate Bill 350 (2015–2016 Reg. Session) Stats 2015, ch. 547.*

passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, which took effect in 2009. On September 24, 2009, CARB adopted amendments to these “Pavley” regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.⁷⁵ Although setting emission standards on automobiles is solely the responsibility of the USEPA, the federal CAA allows California to set state-specific emission standards on automobiles if the State first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. A comparison between the AB 1493 standards and the Federal CAFE standards was completed by CARB, and the analysis determined that California emission standards are 16 percent more stringent through the 2016 model year and 18 percent more stringent for the 2020 model year.⁷⁶ CARB is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45-percent GHG reduction in comparison to the 2009 model year.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State’s GHG and Zero Emission Vehicle (ZEV) programs under Section 209 of the Clean Air Act.⁷⁷ The withdrawal of the waiver was effective November 26, 2019. Pursuant to President Biden’s Executive Order 13990, on April 28, 2021, the EPA sought public input on its reconsideration of the withdrawal of California’s waiver.⁷⁸ In response, several states including California filed a lawsuit challenging the withdrawal of the EPA waiver.⁷⁹ As of March 2021, that lawsuit was stayed pending resolution of related litigation.⁸⁰ On April 26, 2021, the EPA issued a Notice of Reconsideration seeking public comment on the current Administration’s proposal to reconsider the withdrawal of California’s waiver.⁸¹

⁷⁵ CARB, *Clean Car Standards—Pavley, Assembly Bill 1493*, www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed by CARB on January 11, 2017.

⁷⁶ CARB, *Comparison of Greenhouse Gas Reductions for all Fifty United States under CAFE Standards and CARB Regulations Adopted Pursuant to AB 1493*, January 23, 2008.

⁷⁷ 84 FR 51310.

⁷⁸ 86 Federal Register 22421 (April 28, 2021).

⁷⁹ *United States District Court for the District Court of Columbia, State of California v. Chao*, Case 1:19-cv-02826, 2019.

⁸⁰ *United States District Court for the District of Columbia, Union of Concerned Scientists v. NHTSA*, Case 1:19-cv-1230, 2019.

⁸¹ U.S. EPA, *EPA Reconsiders Previous Administration’s Withdrawal of California’s Waiver to Enforce Greenhouse Gas Standards for Cars and Light Trucks*, www.epa.gov/newsreleases/epa-reconsiders-previous-administrations-withdrawal-californias-waiver-enforce, accessed July 1, 2021. 86 Federal Register 22421 (April 28, 2021)

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

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

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

4.6.2.3.2.7.3 Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2015–2025.⁸² The components of the Advance Clean Car Standards include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero Emission Vehicles (ZEVs) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (i.e., battery electric and fuel cell electric vehicles).⁸³ In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California through 2025.⁸⁴

4.6.2.3.2.7.4 Executive Order N-79-20 (Zero Emission Vehicles)

On September 23, 2020, Governor Newsom issued Executive Order N-79-20 which requires by 2035, 100 percent of all in-state sales of new passenger cars and trucks will be ZEVs. By 2045, 100 percent of all medium- and heavy-duty vehicles in the state will be

⁸² CARB, *California's Advanced Clean Cars Program, About*, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed October 20, 2020.

⁸³ CARB, *California's Advanced Clean Cars Program, About*, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed October 20, 2020.

⁸⁴ 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 20, 2020.

zero-emission for all operations where feasible. Off-road vehicles will also transition to 100 percent zero-emission by 2035 where feasible. The Executive Order requires CARB to develop passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the State toward the target of 100 percent of in-state sales by 2035.

4.6.2.3.2.7.5 Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions can be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) is required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger VMT and trips so the region can meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target can be achieved through alternative development patterns, infrastructure, and/or transportation measures. The City of Beverly Hills is within the SCAG MPO, which adopted the most recent iteration of the Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS) on September 3, 2020.

4.6.2.3.2.7.6 Senate Bill 743

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

4.6.2.3.2.7.7 California Advanced Clean Trucks Program

In June 2020, CARB approved the Advanced Clean Trucks regulation, which requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. In addition, the regulation requires company and fleet reporting for large employers and fleet owners with 50 or more trucks. CARB estimates that implementation of this regulation will reduce GHG emissions by a total of

approximately 29 MMT of CO₂e between 2020 and 2040 relative to the business-as-usual baseline. By 2040, emissions are expected to be reduced by approximately 4 percent annually compared to the business as usual forecast.⁸⁵

4.6.2.3.2.8 Building Standards

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

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

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

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, codified in Title 24, Part 6 of the California Code of Regulations and commonly referred to as Title 24, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.⁸⁶ On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which went into effect on January 1, 2020. The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.⁸⁷ The 2019 Title 24 Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. As described in the 2019 Title 24 Standards, the standards represent "challenging but achievable design and construction practices" that represent "a major step towards meeting the Zero Net Energy (ZNE) goal." Nonresidential buildings are projected to use approximately 30 percent less energy due mainly to lighting upgrades.⁸⁸ Compliance with Title 24 is enforced through the building permit process.

⁸⁵ CARB, *Final Environmental Analysis for the Proposed Advanced Clean Trucks Regulation, June 23, 2020*, ww3.arb.ca.gov/regact/2019/act2019/finalea.pdf, accessed June 2021.

⁸⁶ CEC, *2019 Building Energy Efficiency Standards*.

⁸⁷ CEC, *2019 Building Energy Efficiency Standards*.

⁸⁸ CEC, *2019 Building Energy Efficiency Standards, Fact Sheet*.

4.6.2.3.2.8.3 California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2020. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Most of the mandatory measure changes in the 2019 CALGreen Code relative to the previous 2016 CALGreen Code were related to definitions and the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicle chargers and Minimum Efficiency Reporting Value (MERV) ratings for air filtration systems.⁸⁹ For nonresidential mandatory measures, the table (Table 5.106.5.3.3 in the CALGreen Code) identifying the number of required EV charging spaces has been revised in its entirety.⁹⁰ Compliance with Title 24 is enforced through the building permit process.

4.6.2.3.2.9 Senate Bill 97

On June 19, 2008, the Office of Planning and Research (OPR) released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation; determination of significance of the project's impact on climate change; and, if the project's impact is found to be significant, the identification of suitable alternatives and mitigation measures.

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

⁸⁹ *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2020.*

⁹⁰ *California Building Standards Commission, 2019 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5—Nonresidential Mandatory Measures, effective January 1, 2020.*

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.⁹¹ The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.⁹²

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.”⁹³

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32.

4.6.2.3.2.10 Solid Waste Sources

4.6.2.3.2.10.1 California Integrated Waste Management Act (Assembly Bill 341)

The California Integrated Waste Management Act of 1989, as modified by AB 341 in 2011, requires each jurisdiction’s source reduction and recycling element to include an

⁹¹ See 14 Cal. Code Regs. Sections 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).

⁹² 14 CCR Section 15064.4(b).

⁹³ 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.

implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000.

4.6.2.3.2.10.2 Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane—40 percent below 2013 levels.
- Hydrofluorocarbons—40 percent below 2013 levels.
- Anthropogenic black carbon—50 percent below 2013 levels.

SB 1383 also requires the California Department of Resources Recycling and Recovery, in consultation with CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

4.6.2.3.2.11 Center for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court’s decision published on November 30, 2015, in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763) (also known as the Newhall Ranch Case) reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area near the City of Santa Clarita. The EIR used a BAU approach to determine whether the project would impede the state’s compliance with the statutory emissions reduction mandate established by the AB 32 Scoping Plan. The Court did not invalidate the BAU approach used in that EIR but did hold that “the Scoping Plan nowhere related that *statewide* level of reduction effort to the percentage of reduction that would or should be required from *individual projects* and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.”⁹⁴

⁹⁴ *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 225–226.

The California Supreme Court suggested regulatory consistency as a pathway to compliance, by stating that a lead agency might assess consistency with AB 32's goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities. The Court recognized that to the extent a project's design features comply with or exceed the regulations outlined in the *Climate Change Scoping Plan*, and adopted by CARB or other state agencies, a lead agency could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill a statewide plan for the reduction or mitigation of GHG emissions. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. The Court also suggested that "[a] lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions," (i.e., a bright line threshold approach), if supported by substantial evidence.⁹⁵

4.6.2.3.3 Regional

4.6.2.3.3.1 South Coast Air Quality Management District

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

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

⁹⁵ *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 230.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.⁹⁶ Within its October 2008 document, 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. However, this proposed residential/commercial threshold was not formally adopted. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 MTCO_{2E} per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects such as commercial/residential projects.

4.6.2.3.3.2 Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted an updated RTP/SCS known as the 2020–2045 RTP/SCS or Connect SoCal.⁹⁷ The 2020–2045 RTP/SCS builds upon the progress made through implementation of the 2016–2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting health/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation. CARB’s new target requiring a 19-percent reduction in per capita GHG emissions has been included in the 2020–2045 RTP/SCS to fulfill SB 375 compliance with respect to meeting the State’s GHG emission reduction goals.⁹⁸

⁹⁶ SCAQMD, *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

⁹⁷ SCAG, *News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

⁹⁸ SCAG, *News Release: SCAG Regional Council Formally Adopts Connect SoCal, September 3, 2020.*

4.6.2.3.4 Local

4.6.2.3.4.1 Beverly Hills Sustainable City Plan

In February 2009, the City adopted the Beverly Hills Sustainable City Plan. The following goals related to GHG emissions are applicable to the Project (City of Beverly Hills 2009):

- **Climate Change and Air Quality Goal:** Combat climate change and improve air quality.
- **Energy Goal:** Encourage the use of energy in a clean and efficient manner and the use of renewable energy sources.
- **Land Use, Transportation, and Open Space Goal:** Foster an energy-efficient, walkable community that provides ample goods, services, and benefits to all residents while respecting the local environment.

The Sustainable City Plan is not considered a qualified GHG reduction plan as defined in the CEQA Guidelines Section 15183.5. The City is currently developing a Climate Action and Adaptation Plan to reduce and encourage the reduction of GHG emissions citywide, which is expected to be completed in mid-2022 (City of Beverly Hills 2020a).

4.6.2.3.4.2 City of Beverly Hills General Plan

The City of Beverly Hills General Plan Land Use and Open Space Elements contain the following policies specific to GHG emissions (City of Beverly Hills 2010g):

- **Policy LU 14.1 City Form.** Accommodate a balanced mix of land uses and encourage development to be located and designed to enable residents access by walking, bicycling, or taking public transit to jobs, shopping, entertainment, services, and recreation, thereby reducing automobile use, energy consumption, air pollution, and greenhouse gases.
- **Policy LU 14.2 Site Development.** Require that sites and buildings be planned and designed to meet applicable environmental sustainability objectives by: (a) facilitating pedestrian access between properties and access to public transit; (b) providing solar access; (c) assuring natural ventilation; (d) enabling capture and re-use of stormwater and graywater on-site while reducing discharge into the stormwater system; and (e) using techniques consistent with the City's sustainability programs such as the City's Green Building Ordinance.

- **Policy LU 14.4 New Construction of Private Buildings.** Require that new and substantially renovated buildings be designed and constructed in accordance with the City's sustainability programs such as the City's Green Building Ordinance or comparable criteria to reduce energy, water, and natural resource consumption, minimize construction wastes, use recycled materials, and avoid the use of toxics and hazardous materials.
- **Policy OS 7.9 Greenhouse Gas Reduction.** Work with the CARB and the SCAQMD to comply with statewide GHG reduction goals as established in AB 32 and other subsequent legislation.
- **Policy OS 7.10 Citywide GHG Assessment.** Comply with pertinent state regulations to assess citywide GHG emissions for existing land uses and the adopted general plan build-out.
- **Policy OS 7.11 Air Quality Education.** Educate the public about air quality standards, health effects, and efforts that residents can make to improve air quality and reduce GHG emissions in the Los Angeles Basin.

4.6.2.3.4.3 Beverly Hills Complete Streets Plan

The Beverly Hills Complete Streets Plan is a long-range planning document that outlines the City's overall transportation policy guidance with the aim of transforming Beverly Hills from an auto-dominated community to one that embraces all modes of travel, reduces vehicle trips on local streets, and is a world class bicycling city. The plan includes recommendations for bikeway network enhancements, priority corridors for pedestrian improvements, first/last mile transit improvements, transportation network efficiency improvements, and neighborhood traffic management, among others.

4.6.2.4 Existing Conditions

4.6.2.4.1 Existing Statewide GHG Emissions

GHG emissions are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the

last 150 years. As reported by the CEC, California contributes 1 percent of global⁹⁹ and 6.4 percent of national GHG emissions.¹⁰⁰ Approximately 82 percent of GHGs in California consist of CO₂ produced from fossil fuel combustion.¹⁰¹ The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2017.¹⁰² It includes estimates for CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. The GHG inventory for California for years 2011 through 2017 is presented in Table 4.6-3 on page 4.6-38.

As shown in Table 4.6-3, the GHG inventory for California in 2017 was 424.10 million MTCO_{2e}. Based on data presented above, the statewide GHG inventory fell below 1990 levels for the first time in 2016, consistent with the goals of AB 32.¹⁰³

4.6.2.4.2 Existing Project Site Emissions

The Project Site is currently occupied by commercial and institutional uses comprising approximately 56,787 square feet. Specifically, 456 North Rodeo Drive is developed with a two-story, 6,895-square-foot commercial structure and nine surface parking spaces, 468 North Rodeo Drive is currently developed with a two-story, 20,265-square-foot commercial structure and six surface parking spaces, 461–465 North Beverly Drive is currently developed with a two-story, 23,351-square-foot institutional use and five surface and 45 underground parking spaces, and 449, 451, and 453 North Beverly Drive is developed with a one-story, 6,276-square-foot commercial structure. The existing structure at 449, 451, and 453 North Beverly Drive is currently leased for private art storage.

Area source emissions for the Project Site are generated by maintenance equipment, landscape equipment, and use of products that contain solvents. Energy source emissions are 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

⁹⁹ CEC, *California Energy Commission—Tracking Progress, Greenhouse Gas Emission Reductions*, last updated December 2018, p. 2.

¹⁰⁰ CEC, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, CEC-600-2006-013, October 2006.

¹⁰¹ CEC, *California Energy Commission—Tracking Progress, Greenhouse Gas Emission Reductions*, last updated December 2018, p. 2.

¹⁰² 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.

¹⁰³ California Air Resources Board Press Release, ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time, accessed October 20, 2020.

**Table 4.6-3
California GHG Inventory
(million metric tons CO₂e)**

	2011	2012	2013	2014	2015	2016	2017
Transportation	161.8	161.3	160.9	162.5	166.2	168.8	169.9
<i>On Road</i>	0	0	0	0	0	0	0
Passenger Vehicles	111.4	111.8	111.5	112.2	116.3	119	119.9
Heavy Duty Trucks	36.65	35.93	35.55	35.83	35.19	35.61	35.81
<i>Ships & Commercial Boats</i>	3.52	3.43	3.42	3.49	3.42	3.24	3.32
<i>Aviation (Intrastate)</i>	3.73	3.75	3.93	3.9	4.22	4.44	4.68
<i>Rail</i>	2.64	2.47	2.4	2.63	2.42	2.17	1.83
<i>Off Road</i>	2.13	2.23	2.33	2.43	2.53	2.63	2.73
<i>Unspecified</i>	1.72	1.71	1.77	2.04	2.07	1.66	1.54
<i>Percent of Total Emissions</i>	36%	36%	36%	37%	38%	40%	40%
Electric Power	87.97	95.52	89.4	88.46	83.82	68.59	62.39
<i>In-State Generation</i>	41.1	51.02	49.42	51.68	49.88	42.28	38.45
Natural Gas	35.81	45.76	45.61	46.38	45.11	38.25	34.88
Other Fuels	4.03	4.44	2.91	4.4	3.65	2.54	2.61
Fugitive and Process Emissions	1.25	0.82	0.9	0.9	1.13	1.48	0.95
<i>Imported Electricity</i>	46.87	44.5	39.98	36.79	33.93	26.32	23.94
<i>Unspecified Imports</i>	15.52	17.48	11.82	13.44	11.21	9.68	8.84
<i>Specified Imports</i>	31.35	27.02	28.15	23.35	22.72	16.64	15.1
<i>Percent of Total Emissions</i>	20%	21%	20%	20%	19%	16%	15%
Commercial and Residential	46.37	43.76	44.42	38.25	38.82	40.62	41.14
<i>Residential Fuel Use</i>	30.51	28.21	29.02	23.75	24.17	25.27	26.00
Natural Gas	27.51	25.76	26.53	21.58	21.90	22.80	23.62
Other Fuels	2.13	1.58	1.62	1.28	1.39	1.58	1.49
Fugitive Emissions	0.87	0.87	0.88	0.88	0.89	0.89	0.89
<i>Commercial Fuel Use</i>	13.71	13.41	13.30	12.52	12.67	13.14	13.02
Natural Gas	11.33	11.25	11.28	10.40	10.50	10.90	11.06
Other Fuels	2.38	2.16	2.02	2.12	2.16	2.24	1.95
<i>Commercial Cogeneration Heat Output</i>	0.78	0.76	0.70	0.57	0.55	0.77	0.68
<i>Other Commercial and Residential</i>	1.37	1.38	1.40	1.41	1.42	1.43	1.44
<i>Percent of Total Emissions</i>	10%	10%	10%	9%	9%	10%	10%
Industrial	90.17	91.08	93.69	94.02	91.48	89.49	89.4
<i>Refineries</i>	30.12	29.88	29.22	29.4	28.21	29.61	29.89
<i>General Fuel Use</i>	18.78	18.91	19.31	19.88	19.23	19.23	19.07
Natural Gas	14.5	14.48	14.37	15.57	14.79	15.28	15.28
Other Fuels	4.28	4.43	4.94	4.31	4.45	3.96	3.78
<i>Oil & Gas Extraction^a</i>	16.73	16.73	19.06	19.47	19.58	17.11	17.22
Fuel Use	14.91	14.87	16.94	17.18	17.22	14.84	14.94
Fugitive Emissions	1.82	1.86	2.12	2.29	2.36	2.27	2.28

Table 4.6-3 (Continued)
California GHG Inventory
(million metric tons CO₂e)

	2011	2012	2013	2014	2015	2016	2017
<i>Cement Plants</i>	5.37	6.92	7.21	7.66	7.47	7.6	7.66
Clinker Production	3.7	4.22	4.47	4.78	4.69	4.67	4.85
Fuel Use	1.67	2.7	2.74	2.88	2.77	2.93	2.81
<i>Cogeneration Heat Output</i>	11.15	10.81	10.99	9.64	8.98	7.99	7.79
<i>Other Process Emissions</i>	8.02	7.81	7.9	7.98	8.01	7.95	7.78
<i>Percent of Total Emissions</i>	20%	20%	21%	21%	21%	21%	21%
Recycling and Waste	8.47	8.49	8.52	8.59	8.73	8.81	8.89
<i>Landfills^b</i>	8.19	8.20	8.22	8.28	8.40	8.47	8.54
<i>Composting</i>	0.27	0.29	0.30	0.31	0.33	0.34	0.35
<i>Percent of Total Emissions</i>	2%	2%	2%	2%	2%	2%	2%
High Global Warming Potential	14.53	15.54	16.75	17.73	18.60	19.26	19.99
<i>Ozone Depleting Substance Substitutes</i>	14.21	15.25	16.38	17.42	18.32	19.00	19.64
<i>Electricity Grid SF6 Losses^c</i>	0.24	0.24	0.29	0.17	0.14	0.10	0.18
<i>Semiconductor Manufacturing^b</i>	0.08	0.06	0.08	0.14	0.14	0.16	0.17
<i>Percent of Total Emissions</i>	3%	3%	4%	4%	4%	5%	5%
Agriculture^d	34.34	35.46	33.99	35.06	33.75	33.51	32.42
<i>Livestock</i>	23.26	23.89	22.92	23.24	22.66	22.57	22.68
Enteric Fermentation (Digestive Process)	11.40	11.52	11.22	11.28	10.95	10.93	11.05
Manure Management	11.86	12.38	11.71	11.96	11.70	11.64	11.62
<i>Crop Growing & Harvesting</i>	7.42	7.70	7.36	7.30	6.70	6.96	6.63
Fertilizers	5.71	5.94	5.63	5.67	5.24	5.34	5.14
Soil Preparation and Disturbances	1.63	1.68	1.65	1.56	1.38	1.54	1.40
Crop Residue Burning	0.08	0.08	0.08	0.08	0.08	0.08	0.09
<i>General Fuel Use</i>	3.65	3.88	3.71	4.51	4.40	3.97	3.11
Diesel	2.52	2.47	2.53	3.39	3.66	3.21	2.40
Natural Gas	0.66	0.70	0.69	0.63	0.64	0.72	0.67
Gasoline	0.48	0.71	0.49	0.49	0.10	0.04	0.05
Other Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Percent of Total Emissions</i>	8%	8%	8%	8%	8%	8%	8%
Total Net Emissions	443.6	451.2	447.7	444.7	441.4	427.0	424.1

^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.

^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 2000–2017—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of CO₂e—(based upon IPCC Second Assessment Report's Global Warming Potentials).

from solid waste generated at the Project Site and water source emissions are generated from water used on the Project Site. Table 4.6-4 below presents the GHG emissions associated with the existing land uses. It should be noted that existing operational emissions presented in Table 4.6-4, does not include vacant uses.

**Table 4.6-4
Existing (2021) Project Site Annual GHG Emissions Summary**

Scope	Metric Tons of Carbon Dioxide Equivalent (MTCO ₂ e)
Area	<1
Energy	86
Mobile	408
Solid Waste	6
Water/Wastewater Generation	10
Total Emissions	511
<p>Numbers may not add up exactly due to rounding.</p> <p>^a CO₂e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operational (Baseline) CalEEMod output file within Appendix B of this Final EIR.</p> <p>Source: Eyestone Environmental, 2022.</p>	

4.6.3 Project Impacts

4.6.3.1 Thresholds of Significance

The Project would have a significant impact related to GHG emissions 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.

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

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).¹⁰⁴ The CEQA Guidelines were amended in response to SB 97 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.¹⁰⁵ 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.¹⁰⁶ 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 greenhouse gas emissions."¹⁰⁷ 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.¹⁰⁸

¹⁰⁴ See, generally, Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.

¹⁰⁵ 14 CCR § 15064(h)(3).

¹⁰⁶ 14 CCR § 15064(h)(3).

¹⁰⁷ 14 CCR Section 15064(h)(3).

¹⁰⁸ See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA..." Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 MTCO₂e/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. (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)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is SCAG's 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 2008 *Climate Change Scoping Plan* and subsequent updates, and the City of Beverly Hills Sustainable City Plan.

4.6.3.1.1 SCAQMD Bright-Line Threshold

Because the City has not adopted a general use threshold for evaluating the significance of GHG emissions, the City has chosen to use project-specific thresholds that are prepared for projects on a case-by-case basis. In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010 (SCAQMD 2010):

- **Tier 1.** If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- **Tier 2.** Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines Section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.

Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration for Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).

- **Tier 3.** Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 10,000 MT of CO₂e per year for industrial projects, 3,500 MT of CO₂e per year for residential projects, 1,400 MT of CO₂e per year for commercial projects, and 3,000 MT of CO₂e per year for mixed-use projects.
- **Tier 4.** Establishes a service population threshold to determine significance. The Working Group has provided a recommendation of 4.8 MT of CO₂e per year for land use projects.

The Project would not be statutorily or categorically exempt, and therefore Tier 1 does not apply. As previously stated, the City does not have a local, qualified GHG reduction plan for the Project to tier off; therefore, Tier 2 would not apply. As such, Tier 3 is the most applicable SCAQMD-recommended threshold to utilize, and pursuant to CEQA Guidelines Section 15064, this threshold is considered appropriate by the City to evaluate GHG emission impacts for the Project. The Project is a mix of hotel and retail uses; accordingly, the applicable Tier 3 threshold would be the bright line threshold of 3,000 MT of CO₂e per year for mixed-use projects.

4.6.3.2 Methodology

Section 15064.4 of the CEQA Guidelines recommend certain factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)(3)).¹⁰⁹

¹⁰⁹ See generally California Natural Resources Agency, *Final Statement of Reasons for Regulatory Action (December 2009)*, pp. 11–13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions. Nor has any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. As discussed above, since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the City will rely on the use of the SCAQMD draft GHG thresholds. In addition, the Project's impacts related to GHG emissions will be evaluated based on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. The evaluation of consistency with such plans is another component for determining the significance of the Project's GHG emissions-related impacts on the environment.

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. The significance of the Project's GHG emissions impacts will be based on the SCAQMD bright line threshold as discussed above.

4.6.3.2.1 Consistency with Plans

The Project's GHG impacts are evaluated by assessing the Project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies. As discussed previously, the City has established goals and actions to reduce the generation and emission of GHGs from both public and private activities in the Sustainable City Plan.

The OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Although the City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan, the City has a number of plans to help reduce GHG emissions, including the Sustainable City Plan that encourage and require applicable projects to implement energy efficiency measures. In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. 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 contain measures to achieve VMT reductions required under SB 375. 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 exceedance of performance-based standards included in the regulations outlined in the applicable portions of the *2008 Climate Change Scoping Plan* and subsequent updates, SCAG's 2020–2045 RTP/SCS, and the Sustainable City Plan.

4.6.3.2.2 Quantification of Emissions

In view of the above considerations, this Final EIR quantifies the Project's total annual GHG emissions, taking into account the GHG emission reduction features that would be incorporated into the Project's design.

This Final 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. This comparison is included herein for informational purposes only, including in order to disclose the relative carbon efficiency of the Project and 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. The Project without Reduction Features scenario does not account for additional energy efficiency measures beyond what is required by code or measures to reduce natural gas usage. The City is focusing its determination of the significance of the Project's GHG emissions in relation to the Project's location and design and its consistency with plans and policies adopted to reduce GHGs, as explained below. However, the Project without Reduction Features does take into account certain regulatory measures included in the 2008 Climate Change Scoping Plan and subsequent updates, SCAG's RTP/SCS, and the Sustainable City Plan.¹¹⁰

4.6.3.2.3 Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.¹¹¹ 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

¹¹⁰ *The CalEEMod model does not account for all regulatory measures in the 2008 Climate Change Scoping Plan and subsequent updates. However, the analysis does take into account reductions due to Pavley I and LCFS as discussed in further detail below.*

¹¹¹ *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

develop a standardized approach to the voluntary reporting of GHG emissions.”¹¹² Although no numerical thresholds of significance have been formally adopted, 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 Final EIR.

The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions.¹¹³ 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).¹¹⁴

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

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.¹¹⁵ For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally,

¹¹² California Climate Action Registry, *General Reporting Protocol Version 3.1*, January 2009.

¹¹³ USEPA, *Greenhouse Gases at EPA*, www.epa.gov/greeningepa/greenhouse-gases-epa, accessed October 20, 2020.

¹¹⁴ 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.

¹¹⁵ 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.

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.”¹¹⁶ 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, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.¹¹⁷

4.6.3.2.4 Construction

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

¹¹⁶ OPR Technical Advisory—CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, June 2008, p. 5.

¹¹⁷ California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod[™], www.caleemod.com.

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

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. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. SCAQMD defines the lifetime of a project as 30 years.¹¹⁸ Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

4.6.3.2.5 Operation

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

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

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, as provided by CalEEMod, 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 Southern California Edison (SoCal Edison) were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on SoCal Edison projections for year 2026 (364 lbs. CO₂ per MWh). SoCal Edison's carbon intensity projections also take into account SB 100 and SB 350 RPS requirements for renewable energy.

¹¹⁸ SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, 2008.

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

Mobile source GHG emissions are calculated based on an estimate of the Project's annual VMT, which is derived using CalEEMod based on the trip generation factors provided in Appendix B, Detailed Trip Generation Rates, of the Project's Transportation Assessment Impact Report included in Appendix H of this Final EIR.¹¹⁹ The CalEEMod-derived VMT values account for the daily and seasonal 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 Project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, as provided by CalEEMod, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the proposed land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider as provided by CalEEMod, and the GWP values for the GHGs emitted. Water usage factors are obtained from surveys conducted throughout California for various land uses. Project water consumption GHG emissions are then quantified based on electricity usage and carbon intensity factors specific to electricity providers described above.

The GHG emissions calculations for the Project include credits or reductions for consistency with applicable Project Design Feature GHG-PDF-1 set forth in this Final EIR. These features are included as part of the Buildout with Reducing Measures scenario shown in Table 4.6-10 on page 4.6-72 in the analysis below. 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

¹¹⁹ *Fehr and Peers, Transportation Impact Report, Appendix B, Detailed Trip Generation Rates and Traffic Forecasts for Cheval Blanc Beverly Hills Specific Plan, January 29, September 2021.*

California's Statewide RPS beyond current levels of renewable energy).¹²⁰ It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. The CalEEMod model incorporates EMFAC2014 emission factors which do not take into account the most recent 2017 LCFS updates. As a conservative assumption, GHG emissions reductions resulting from the LCFS updates were not included in the Project's emissions inventory. In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of Project-generated trips as a result of Project features (e.g., close proximity to transit) will provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not already in place but are anticipated to be enforced by Project buildout (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, GHG emissions reductions potentially attributable to operation of the Cap-and-Trade 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 policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the State's long-term climate goals.

4.6.3.3 Project Design Features

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

Project Design Feature GHG-PDF-1: The Project shall meet the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) standards for certification of environmentally sustainable buildings. The Project shall incorporate LEED features achieving ~~Silver~~Gold certification. The design of the new building will incorporate the following sustainability features:

- ~~a.~~ Use of Energy Star-labeled products and appliances.
- ~~b.~~ Use of light-emitting diode (LED) lighting or other energy-efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use.
- ~~c.~~ Water-efficient plantings with drought-tolerant species;

¹²⁰ *Project design features are based on relevant year 2020 targets established by AB 32 and the current CARB Scoping Plan Update.*

- d. Fenestration designed for solar orientation, including recessed windows, balconies and overhangs to shade window glazing, while allowing reflected and diffuse daylight into the building to enhance the use of natural light and reduce the need for artificial light sources; and
- e. Pedestrian- and bicycle-friendly design in close proximity to public transportation and with bicycle parking, including charging facilities for e-bicycles, as well as employee lockers and showers, and provision of transit passes to hotel and club employees who use public transportation to travel to and from work. Transit passes would also be provided to hotel guests on request;
- Landscaping and exterior design utilizing subterranean parking and landscaped and shaded non-roof surfaces, light-colored, low-albedo roof surfaces to reduce local heat island effects;
- The reduction of chlorofluorocarbons (CFCs) from the building systems;
- The selection of materials, such as adhesives, sealants, paints, and carpeting, that reduce off-gassing to improve internal air quality;
- The involvement of during design and construction of a LEED Accredited Professional;
- Installation of electric vehicle charging equipment and bicycle parking spaces, including charging facilities for e-bicycles, as well as employee lockers and showers;
- Solar ready collectors for 15 percent of the roof area excluding skylight areas for energy efficiency;
- Track energy usage through advanced energy metering;
- Recycling of a minimum of 65 percent of demolition and construction debris;
- The use of stormwater for irrigation for landscape;
- The use of greywater to offset building systems use of potable water;
- Reduce the Project's embodied carbon through the reduction of petroleum-based insulation products;
- Achieve energy savings of 18 percent over ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers); and
- During construction, treat and reuse any water collected from dewatering operations.

The Project would also comply with all applicable regulatory requirements, including the provisions set forth in the City's Building Code, which would further promote environmental sustainability.

4.6.3.4 Analysis of Project Impacts

Threshold (a): Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold (b): Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG?

4.6.3.4.1 Impact Analysis

4.6.3.4.1.1 Consistency with Applicable Plans and Policies

As discussed above, compliance with applicable GHG emissions reduction plans would result in less-than-significant Project and cumulative impacts. The following section describes the extent to which the Project complies with or exceeds the performance-based standards included in the regulations outlined in the 2008 Climate Change Scoping Plan and subsequent updates, SCAG's RTP/SCS, and the Sustainable City Plan. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

4.6.3.4.1.1.1 Climate Change Scoping Plan

The Climate Change Scoping Plan has a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce Project-related GHG emissions.

Project GHG emissions have been quantified, and as shown in Table 4.6-10 on page 4.6-72 in the analysis below, the Project would result in a net increase of approximately 1,966 MTCO₂e annually when accounting for removal of existing uses. The breakdown of the Project's GHG emissions by source category, as calculated in Appendix B, shows that emissions from area source, mobile source, energy consumption, stationary sources, solid waste generation, water supply, treatment, and distribution; and construction activities would increase in comparison to existing uses. Provided in Table 4.6-5 on page 4.6-53 is an evaluation of applicable mandatory reduction actions/strategies outlined

**Table 4.6-5
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan**

Mandatory Regulatory Compliance Measures
<p>Energy</p> <p>RPS Program and SB 2X: The California RPS program (Updated under SB 2X) requires both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 350 further requires 50 percent renewables by 2030.^a In 2019, SoCal Edison indicated that 48 percent of its electricity came from renewable resources in Year 2019.^b Electricity GHG emissions provided in Table 4.6-10 on page 4.6-72 assume that SoCal Edison 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 2026) consistent with SB 350. The CalEEMod default carbon intensity for electricity generated by SoCal Edison (pounds of CO₂e per MWh) is based on a year 2007 renewables portfolio of 8 percent and was therefore updated within CalEEMod to reflect the year 2026 renewables portfolio. Please note that under recently passed SB 100, SoCal Edison is required to generate electricity that would increase renewable energy resources to 50 percent by 2026 and, 60 percent by 2030, and 100 percent by 2045. The Project complies with these percentage renewable requirements inasmuch as the Project is served by SoCal Edison, which is committed to achieving the increase in renewable energy resources by the required dates.</p> <p>SB 350: As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. The Project would further support this regulation since Project Design Feature GHG-PDF-1 would require the Project to implement measures to reduce overall energy usage compared to baseline conditions.</p>
<p>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 by default 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 4.6-10 on page 4.6-72 account for a 25-percent reduction in lighting electricity consumption.</p> <p>Cap-and-Trade Program: As required by AB 32 and the <i>Climate Change Scoping Plan</i>, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity usage per year presented in Table 4.6-10 on page 4.6-72 would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. While not quantified in this analysis, the Project would benefit from this regulatory program in that the GHG emissions associated with the Project's electricity and fuel usage would indirectly be covered by the Cap-and-Trade Program.</p>
<p>Mobile</p> <p>Advanced Clean Cars Program: CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025 and increasing the number of zero emission vehicles manufactured in the 2018 through 2025 model years. Standards under the Advanced Clean Cars Program apply to all passenger cars and light duty trucks within California and indirectly used by employees and deliveries to the Project. Mobile source GHG emissions provided in Table 4.6-10 on page 4.6-72 conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model default fleet mix for the Air Basin does not yet account for this regulation.</p> <p>The Scoping Plan recommends additional mobile source strategies through the extension of the Advanced</p>

Table 4.6-5 (Continued)
Mandatory Regulatory Compliance Measures within the Climate Change Scoping Plan

Mandatory Regulatory Compliance Measures

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

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 7.5-percent reduction in CI would indirectly reduce the Project's mobile source emissions.

Solid Waste

California Integrated Waste Management Act of 1989: The Act 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 Act 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 Beverly Hills, which currently achieves a diversion rate of 60 percent. Project-related GHG emissions from solid waste generation provided in Table 4.6-10 on page 4.6-72 includes a 60-percent reduction in solid waste generation source emissions consistent with the minimum diversion rate required for the City of Beverly Hills (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 *Edison International, 2019 Sustainability Report.*

^c *CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm, accessed March 7, 2021.*

^d *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks, accessed March 7, 2021.*

^e *CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm, accessed March 7, 2021.*

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

^g *AB 341 (2011).*

Source: Eyestone Environmental, 2022.

in the Climate Change Scoping Plan that through implementation would serve to indirectly reduce Project GHG emissions.¹²¹

Further evaluation of project design features and specific applicable policies and measures in the Climate Change Scoping Plan is provided in Table 4.6-6 on page 4.6-56. As detailed therein, the Project would not conflict with the Climate Change Scoping Plan, which is intended to reduce GHG emissions.

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

4.6.3.4.1.1.2 2020–2045 RTP/SCS

On September 3, 2020, SCAG’s Regional Council formally adopted the 2020–2045 RTP/SCS (titled Connect SoCal). The SCAG 2020–2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars by 8 percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with the most recent CARB targets adopted in March 2018. The 2020–2045 RTP/SCS includes ten goals with corresponding implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The Project’s consistency with the 2020–2045 RTP/SCS is discussed in Table 4.6-7 on page 4.6-61.

As shown therein, the Project would be consistent with the GHG emission reduction strategies contained in the 2020–2045 RTP/SCS. As discussed in more detail below, Project-related transportation emissions are reduced by approximately 67 percent (see Appendix B of this Final EIR); therefore, the Project would be consistent with the 2020–2045 RTP/SCS and CARB targets.

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

¹²¹ *An evaluation of reduction actions/strategies applicable to stationary sources is not necessary, as the Project’s only potential stationary sources emissions will be created by emergency generators which would only be used in an emergency. However, as a conservative assumption, stationary emissions from emergency generators was included in the analysis below.*

**Table 4.6-6
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>California Code of Regulations (CCR), Title 20: The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.</p>	State and CEC	<p>No Conflict. These standards are included in default parameters provided in Table 4.6-10 on page 4.6-72. These standards would apply to appliances used during Project operations.</p>
<p>CCR, Title 24, Building Standards Code: The 2019 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.^a</p> <p>The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.</p>	State and CEC	<p>No Conflict. Consistent with regulatory requirements, the Project shall comply with applicable provisions of the Beverly Hills Building Code that in turn require compliance with mandatory standards included in the CALGreen Code. The 2019 Title 24 standards are substantially more efficient than the 2016 Title standards. The 2016 standards are included in default parameters provided in CalEEMod. Therefore, a conservative 10-percent reduction was applied to the default CalEEMod parameters to account for the more stringent 2019 Title 24 standards and are reflected in Project-related GHG emissions provided in Table 4.6-10 on page 4.6-72.</p>
<p>Assembly Bill 1109 (AB 1109): The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing for sale in the state specified general purpose lights that contain levels of hazardous substances, and it requires the establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.^b</p>	State/ Manufacturers	<p>No Conflict. The Project would not conflict with requirements under AB 1109 because it complies with local and state green building programs and incorporates energy efficient lighting and electricity consumption with implementation of GHG-PDF-1. This reduction was not reflected in CalEEMod default assumptions and was therefore included in the calculation of Project GHG emissions. It should be noted that the Project takes into account compliance with EISA lighting requirements which results in a 25-percent reduction in lighting energy compared to CalEEMod defaults.</p>
<p>Senate Bill (SB) 375: SB 375 requires integration of planning processes for transportation, land-use and housing.</p>	State, CARB	<p>No Conflict. SB 375 requires SCAG to direct the development of the SCS for the region. The Project represents an infill</p>

Table 4.6-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>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.</p>	<p>Regional, SCAG</p>	<p>development within an existing urbanized area that would concentrate new hotel and retail uses within an HQTAs. As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region. Further, as discussed below, the Project results in a reduction in vehicle trips compared to a standard project. Therefore, the Project would be consistent with SB 375, the reduction in passenger vehicle GHG emissions per capita goals provided in the 2020–2045 RTP/SCS.</p>
<p>By 2019, adjust performance measures used to select and design transportation facilities.</p> <ul style="list-style-type: none"> Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.). 	<p>CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans</p>	<p>No Conflict. The Project would not involve construction of transportation facilities. However, the Project Site is located within 0.3 mile of bus stops served by the Metro. In addition, the Project is located approximately 0.4 mile <u>walking distance</u> from the future Metro D (formerly Purple) Line Rodeo Station. The Project will provide bike parking, charging facilities for e-bicycles and employee lockers and showers to encourage bike commuting by employees. The Project's proximity to transit and the provision of free transit passes to hotel and club employees who use transit to commute encourages the use of mass transit resulting in a reduction of Project-related vehicle trips to and from the Project Site.</p>
<p>By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).</p>	<p>CalSTA, Caltrans, CTC, OPR/SGC, CARB</p>	<p>No Conflict. The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City codes.</p>
<p>Implement California Sustainable Freight Action Plan:</p> <ul style="list-style-type: none"> Improve freight system efficiency. Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both 	<p>CARB</p>	<p>Not Applicable. The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.</p>

**Table 4.6-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		
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.	State	No Conflict. The Project will comply with applicable provisions of the City of Beverly Hills Building Code which in turn requires compliance with mandatory standards included in the CALGreen Code (20-percent overall water use reduction). Project water consumption would be consistent with the requirements under 2019 CALGreen Code. Compliance with these requirements would 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.
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.		No Conflict. The Project would comply with Title 24 which requires that rooftop areas on multi-family buildings and non-residential buildings to 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 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and associated emissions to convey, treat, and distribute water; it also reduces emissions from wastewater treatment.	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. Such measures include compliance with the CalGreen and the California Plumbing Code. 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:	CARB, CalRecycle,	No Conflict. Senate Bill 605 (SB 605) was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived

Table 4.6-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<ul style="list-style-type: none"> • 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels. 	CDFA, SWRCB, Local air districts	Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels. ^e SB 1383 requires various agencies including CARB, California Department of Food and Agriculture (CDFA), the State Water Resources Board (SWRCB) to be responsible for adopting regulations to reduce GHG emissions. These regulations would be applicable to the Project. Therefore, the Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.
<p>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.</p>	CARB, CalRecycle, CDFA, SWRCB, Local air districts	<p>No Conflict. Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50-percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025. The SB 1383 regulations go into effect January 1, 2022.^f</p> <p>The Project would not conflict with AB 341, which requires not less than 75 percent of commercially generated solid waste generated (including organic waste) be source reduced through recycling, composting or diversion. Reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383. This reduction in solid waste generation was accounted for in the calculation of Project GHG emissions.</p>
<hr/> <p><i>CalRecycle = California Department of Resources Recycling and Recovery</i> <i>CalSTA = California State Transportation Agency</i> <i>Caltrans = California Department of Transportation</i></p>		

Table 4.6-6 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p> <i>CARB = California Air Resources Board</i> <i>CDFA = California Department of Food and Agriculture</i> <i>CTC = California Transportation Commission</i> <i>DOF = California Department of Finance</i> <i>GoBiz = Governor's Office of Business and Economic Development</i> <i>SCAG = Southern California Association of Governments</i> <i>SGC = Strategic Growth Council</i> <i>SWRCB = State Water Resources Control Board</i> ^a <i>CEC, Adoption Hearing, 2019 Building Energy Efficiency Standards.</i> ^b <i>2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.</i> ^c <i>Cal. Pub. Res. Code § 41780.01(a).</i> ^d <i>CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, accessed November 20, 2020.</i> ^e <i>CARB, Reducing Short-Lived Climate Pollutants in California, www.arb.ca.gov/cc/shortlived/shortlived.htm.</i> ^f <i>CARB, Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, www.calrecycle.ca.gov/climate/slcp/.</i> <i>Source: Eyestone Environmental, 2022.</i> </p>		

**Table 4.6-7
Consistency with Applicable SCAG 2020–2045 RTP/SCS Strategies**

Reduction Strategy	Consistency Analysis
<p>Focus Growth Near Destinations & Mobility Options.</p> <ul style="list-style-type: none"> • Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets • Plan for growth near transit investments and support implementation of first/last mile strategies • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) • Identify ways to “right size” parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking) 	<p>Consistent. The Project is in an infill location with convenient access to public transit and opportunities for walking and biking which would promote an improved quality of life by facilitating a reduction of vehicle trips, VMT, and air pollution. Specifically, the Project Site is located in a transit-rich neighborhood with bus stops along North Santa Monica Boulevard within 0.3 mile of the Project Site and the future Metro D (<u>formerly Purple</u>) Line Rodeo Station within 0.4 mile <u>walking distance</u> of the Project Site. The Project Site’s proximity to transit would reduce VMT and associated air pollution. An Urban Land Institute shared parking analysis was performed (see Appendix H of this Final EIR) to “right size” parking.</p> <p>The Project’s access to transit, sidewalk improvements, the free transit passes provided to hotel and club employees who use transit to commute to work, the bicycle parking spaces, charging facilities for e-bicycles, and employee lockers and showers provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation.</p>
<p>Leverage Technology Innovations.</p> <ul style="list-style-type: none"> • Promote low emission technologies such as neighborhood EVs, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a “mobility wallet,” an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate “micro-power grids” in communities, for example solar energy, hydrogen fuel cell power storage and power generation 	<p>Consistent. The Project would be constructed in accordance with the California Building Energy Efficiency Standards and CALGreen, which include requirements for a portion of the Project’s parking spaces to be electric vehicle charging spaces capable of supporting future electric vehicle supply equipment, which would promote future use of low emission vehicle technologies. Therefore, the Project would leverage technology innovations.</p>
<p>Promote a Green Region.</p> <ul style="list-style-type: none"> • Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards 	<p>Consistent. The Project is an infill development that would involve construction of hotel and retail uses in an urbanized area and would therefore not interfere with regional wildlife connectivity or convert agricultural land. The Project is designed to achieve a <u>LEED Silver—Gold Certification</u> through</p>

Table 4.6-7 (Continued)

Consistency with Applicable SCAG 2020–2045 RTP/SCS Strategies

Reduction Strategy	Consistency Analysis
<ul style="list-style-type: none"> • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration • Integrate local food production into the regional landscape • Promote more resource efficient development focused on conservation, recycling and reclamation • Preserve, enhance and restore regional wildlife connectivity • Reduce consumption of resource areas, including agricultural land • Identify ways to improve access to public park space 	<p>environmentally-sensitive architecture and building systems, thereby increasing resource efficient development in the city. The Project would also include more than 45,000 square feet of open space. The Project's open space would also reduce the urban heat island effect and support carbon sequestration. Therefore, the Project would support development of a green region.</p>
<p>Source: <i>Eyestone Environmental, 2022.</i></p>	

4.6.3.4.1.1.3 City of Beverly Hills General Plan and Sustainable City Plan

As discussed in detail in Section 4.7, Land Use and Planning, the Project would be consistent with policies of the City's General Plan that are indirectly aimed at reducing GHG emissions through reductions in vehicle miles traveled, energy use, and water consumption. The City of Beverly Hills Sustainable City Plan includes goals aimed at improving energy efficiency, expanding renewable energy use, conserving water, and encouraging efficient land use and transportation patterns (City of Beverly Hills 2009). The Sustainable City Plan also includes policies to increase community participation in sustainability, reduce waste, improve public health through protecting the environment, support a stable and diversified business community, and promote fair and equitable access to goods, services, benefits, and amenities.

Table 4.6-8 on page 4.6-62 summarizes the Project's consistency with applicable measures of the City's Sustainable City Plan. As summarized therein, the Project would be consistent with the applicable measures of the City's Sustainable City Plan. Overall, the Project would not conflict with the applicable goals and actions of the City of Beverly Hills Sustainable City Plan. The Project would generally be consistent with the goals of the Sustainable City Plan as it is an infill development consisting of new hotel and retail on a Project Site located approximately 0.4-mile walking distance from a future Metro D (formerly Purple) Line Rodeo Station. In addition, the Project Site is served by Metro bus

**Table 4.6-8
Consistency with Applicable GHG Emissions Goals and Actions of City of Beverly Hills Sustainable City Plan**

Action	Consistency Analysis
<p>Goal 2. Combat climate change and improve air quality.</p> <ul style="list-style-type: none"> • Objective: Reduce and encourage the reduction of air emissions in City operations and Citywide. • Policy 2: Minimize mobile source emissions from on- and off-road (construction) vehicles. 	<p>Consistent. The Project is in an infill location with convenient access to public transit and opportunities for walking and biking which would promote an improved quality of life by facilitating a reduction of vehicle trips, VMT, and air pollution. Specifically, the Project Site is located in a transit-rich neighborhood with bus stops along North Santa Monica Boulevard within 0.3 mile of the Project Site and the future Metro D (formerly Purple) Line Rodeo Station within 0.4 mile walking distance of the Project Site. The Project Site’s proximity to transit would reduce VMT and associated air pollution.</p> <p>The Project’s access to transit, the free transit passes provided to hotel and club employees who use transit to commute to work, the bicycle parking spaces, charging facilities for e-bicycles and employee lockers and showers provided on-site, and sidewalk improvements would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation.</p> <p>The Project would comply with SCAQMD Rule 403 which requires dust control measures during construction activities. The Project would require the construction contractor(s) to comply with the applicable provisions of the CARB In-Use Off-Road Diesel Vehicle Regulation, which aims to reduce emissions through the installation of diesel particulate matter filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. In addition, the Project would not have large areas of unpaved surfaces. Parking areas would be maintained with good housekeeping practices.</p>
<p>Goal 3. Encourage the use of energy in a clean and efficient manner and the use of renewable energy sources.</p> <ul style="list-style-type: none"> • Objective: Reduce the use of non-renewable fuels through efficiency and an increase in use of renewable energy. • Policy 1: Maximize energy efficiency in both City operations and Citywide. • Policy 2: Maximize the use of renewable energy generating systems and other energy efficiency technologies on City, other agency, residential, and commercial buildings. • Policy 4: Minimize the use of nonrenewable, 	<p>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. The Project would require the construction contractor(s) to comply with the applicable provisions of the CARB In-Use Off-Road Diesel Vehicle Regulation which would reduce emissions as well as fuel usage. Furthermore, operation of the Project would be subject to the 2019 Title 24 Standards which represent “challenging but achievable design and construction practices” that represent “a major step towards meeting the Zero Net Energy (ZNE) goal.</p>

Table 4.6-8 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of City of Beverly Hills Sustainable City Plan

Action	Consistency Analysis
polluting transportation fuels.	
<p>Goal 4. Reduce water use while maintaining a garden-like quality in the City.</p> <ul style="list-style-type: none"> • Objective: Use water efficiently and effectively while managing storm and wastewater in a beneficial manner. • Policy 1: Minimize water consumption, particularly for landscaping through efficient irrigation and drought-tolerant landscaping. • Policy 2: Maximize the availability and use of alternative water sources to provide adequate water supplies for present uses and future growth. 	<p>Consistent. The Project would incorporate water conservation features to reduce water use including greywater systems for irrigation (inaccessible to guests and club members) in accordance with LEED Standards. Water usage rates were calculated consistent with the requirements under the 2016 California Plumbing Code, 2019 California Green Building Code (CALGreen) and reflects approximately a 20-percent reduction in water usage as compared to the base demand.</p> <p>In addition, the Project would include native and cultured California plant species providing drought-tolerant landscaping. The Project would also include installation of water efficient irrigation systems in accordance with CALGreen Section 4.303. Therefore, the Project would minimize water use while maintaining a garden-like quality in the City.</p>
<p>Goal 5. Foster an energy-efficient, walkable community that provides ample goods, services and benefits to all residents while respecting the local environment.</p> <ul style="list-style-type: none"> • Objective: Encourage buildings, infrastructure, parks and open space that better the quality of life for all who live, work and play in the City. • Policy 1: Implement land-use and transportation programs that encourage new buildings, re-use of buildings, infrastructure, parks and open space that improve the quality of life for all who live, work and play in the City. • Policy 2: Promote a diversity of buildings, infrastructure, parks, open space and uses to support a variety of businesses and improve the quality-of-life for residents at all income levels. • Policy 3: Reduce traffic congestion while improving the pedestrian experience on roadways and encourage alternative forms of travel, especially to parks. • Policy 4: Encourage the preservation, enhancement and utilization of parks and other open spaces that are accessible to members of the community and that provide wildlife habitat and environmental functions. 	<p>Consistent. The Project is an infill development in an urban setting that contains a mix of commercial and recreational uses. The Project provides more than 45,000 square feet of open space, including a publicly accessible 670 square-foot pedestrian plaza at the corner of South Santa Monica Boulevard and North Rodeo Drive that would be contiguous to the sidewalk and include private artwork. The Project Site is adjacent to existing sidewalks along North Rodeo Drive, South Santa Monica Boulevard and North Beverly Drive, the Project dedicates additional sidewalk right-of-way along South Santa Monica Boulevard, and the Project provides landscaped parkways along all adjacent sidewalk perimeters, thereby improving the pedestrian experience, facilitating pedestrian access to nearby destinations. Ground floor retail along North Rodeo Drive and South Santa Monica Boulevard, and the replacement of an institutional use at South Santa Monica Boulevard and North Beverly Drive with a ground floor restaurant open to the public, will activate and connect the existing pedestrian corridors. The Project Site is also accessible via existing bus transit facilities.</p> <p>The Project Site is located approximately 0.4 mile walking distance from the future Metro D (formerly Purple) line Rodeo Station. In addition, the Project Site is served by Metro bus lines located within 0.3 mile of the Project Site. Therefore, the Project would</p>

Table 4.6-8 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of City of Beverly Hills Sustainable City Plan

Action	Consistency Analysis
	foster an energy-efficient, walkable community with ample access to goods, services, and benefits to employees and visitors via non-motorized vehicle means, while respecting the local environment.
<p>Goal 6. Encourage a reduction in waste and an increase in the amount of materials recycled.</p> <ul style="list-style-type: none"> • Objective: Reduce waste and use of products resulting from non-renewable sources while increasing recycling beyond state requirements. • Policy 1: Minimize the amount of solid waste deposited in landfills through reducing, reusing and recycling both natural and manmade materials. 	<p>Consistent. The City currently has a 60-percent solid waste diversion rate, which exceeds the AB 939 requirement for municipalities to divert at least 50 percent of solid waste by 2000 (City of Beverly Hills 2020c). The Project would be required to recycle 65 percent of construction and demolition waste in accordance with CALGreen requirements and would be required to comply with the mandatory commercial recycling and organics recycling provisions of AB 341 and AB 1826. Therefore, the Project would minimize its solid waste generation and increase the amount of materials recycled through regulatory compliance. As a result, the Project would be consistent with Goal 6 to encourage a reduction in waste and an increase of materials recycled.</p>
<p>Source: <i>Eyestone Environmental, 2022.</i></p>	

lines, which are within 0.3 mile of the Project Site, and free transit passes will be provided to hotel and club employees who use transit to commute. The Project will provide bike parking, charging facilities for e-bicycles, lockers, and showers to encourage bike commuting by employees. Furthermore, the Project would comply with the CALGreen Code, implement various project design features to reduce energy usage, including Project Design Feature GHG-PDF-1.

In summary, the Project would not conflict with the Sustainable City Plan. Therefore, impacts pertaining to consistency with the Sustainable City Plan would be less than significant.

4.6.3.4.1.1.4 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.¹²² Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, supporting an increase in the use of electric vehicles, improving energy efficiency, and reducing water usage.

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

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. In addition, Executive Order B-55-18 establishes a goal of carbon neutrality by 2045 and supersedes the goal of S-3-05. These goals, however, have not been codified. As discussed above, the Project would implement features to reduce

¹²² *Energy and Environmental Economics, "Deep Decarbonization in a High Renewables Future, Updated Results from the California PATHWAYS Model," June 2018, Amber Mahone. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed long-term scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. The model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

GHG emissions such as installing EV chargers to reduce mobile fuel usage, increasing job density and mix of uses which reduces VMT, and implement energy efficiency and water conservation measures beyond those required by code. These measures would support the goals of S-3-05 and B-55-18 provided in the executive order (e.g., 100 percent clean energy by 2045, double carbon intensity reduction of LCFS, support clean transportation to reduce petroleum use 45 percent by 2030, and 5 million ZEV by 2030).

That being said, studies have shown that, in order to meet the 2050 target, aggressive implementation of 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.”¹²³

Although the Project’s emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State’s achievement of that the 2050 emissions reduction goal and it is reasonable to expect the Project’s net emissions level (1,966 metric tons of CO₂e per year) 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 4.6-10 on page 4.6-72 in the analysis below, represents the maximum emissions inventory for the Project as California’s emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State’s environmental policy objectives. 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 2020–2045 RTP/SCS demonstrates that the Project will be consistent with the post-2030 GHG reduction goals of 19 percent by 2035.

The Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State’s long-term climate policies. On October 30, 2020, CARB certified the 2020–2045 RTP/SCS to meet the region’s GHG emissions reduction targets consistent with SB 375.¹²⁴ As discussed above, the Project’s daily VMT would be reduced by 67 percent in comparison to a project without VMT reducing features. This reduction in VMT supports the goals of the 2020–2045 RTP/SCS with an estimated 19-percent decrease in per capita GHG emissions from passenger

¹²³ CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008, p. 117.

¹²⁴ CARB, *Executive Order G-20-239*, October 30, 2020.

vehicles by 2035. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2030 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15 as well as Executive Order B-55-18 which requires carbon neutrality by 2045.

4.6.3.4.1.1.5 Conclusion

The above plan consistency analysis demonstrates that the Project does not conflict with the plans, policies, regulations, and GHG reduction actions/strategies outlined in applicable GHG reduction plans and policies. Therefore, impacts related to regulatory consistency would be less than significant.

4.6.3.4.1.2 Project Emissions

As discussed above, Section 15064.4 of the CEQA guidelines recommends quantification of a Project's GHG emissions. In support of the above regulatory consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the 2008 Climate Change Scoping Plan and subsequent updates, the 2020–2045 RTP/SCS, and the Sustainable City Plan, quantitative calculations are provided below.

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

- Construction: emissions associated with demolition of the existing buildings and surface parking areas, shoring, excavation, grading, and construction-related equipment and vehicular activity;
- Area source: emissions associated with landscaping equipment and consumer products;
- Energy source (building operations): emissions associated with space heating and cooling, water heating, energy consumption, and lighting;
- Mobile source: emissions associated with vehicles traveling to and from the Project Site;

- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of 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.

4.6.3.4.1.2.1 Construction

As described in Section 2.0, Project Description, of this Final EIR, construction of the Project is anticipated to commence in 2022 and would occur in two phases, which would overlap in their duration. Phase 1 would involve demolition of 449 and 461 North Beverly and construction of the 449 North Beverly subterranean parking structure to grade and opening of the relocated alley with overhead protection. Phase 2 would include the balance of the Project. The overall duration of construction is estimated to be approximately 38 months with Project buildout in 2026. Project construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating activities. Construction of Phase 1 would take approximately 7.5 months. Construction of Phase 2 would overlap Phase 1 by approximately 1.5 months and is estimated to last approximately 32 months.

Construction of the subterranean parking garage would extend to a maximum depth of approximately 44 feet below ground surface. During construction of the Project, approximately 124,920 cubic yards of earth would be removed from the Project Site, including approximately 34,564 cubic yards during Phase 1 and 90,356 cubic yards during Phase 2. The designated haul route will be dependent on the time of day in order to reduce traffic congestion in the vicinity of the Project Site. Between the hours of 7:00 P.M. to 10:00 P.M., the designated outbound (leaving the Project Site) haul route is anticipated to be from the Project Site to eastbound South Santa Monica Boulevard to Burton Way to San Vicente Boulevard to southbound La Cienega Boulevard to Interstate 10. The reverse of this route would be used for inbound truck traffic from 7:00 P.M. to 10:00 P.M. Between the hours of 10:00 P.M. and 7:30 A.M., the designated outbound (leaving the Project Site) haul route is anticipated to be from the Project Site to southbound Beverly Drive to eastbound Wilshire Boulevard to southbound La Cienega Boulevard to Interstate 10. Between the hours of 10:00 P.M. to 7:30 A.M., the inbound haul route would be from Interstate 10 to

northbound La Cienega Boulevard to westbound Wilshire Boulevard to northbound North Camden Drive to eastbound South Santa Monica Boulevard into the Project Site.

It is noted that intermittent lane closures associated with construction of the future Metro D (formerly Purple) Line Rodeo Station are anticipated to occur on Beverly Drive through 2024. When periodic lane closures associated with the Metro station construction occur on Beverly Drive and/or Wilshire Boulevard, the nighttime haul trucks would utilize the evening (7:00 P.M. to 10:00 P.M.) haul route described above.

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 4.6-9 on page 4.6-71.

As presented in Table 4.6-9, construction of the Project is estimated to generate a total of 5,089 MTCO_{2e}. As recommended by the SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.¹²⁵ This results in annual Project construction emissions of 170 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 Final EIR.

4.6.3.4.1.2.2 Operation

4.6.3.4.1.2.2.1 Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. When accounting for removal of existing uses, the Project would result in a net increase in area source GHG emissions. As shown in Table 4.6-10 on page 4.6-72, the Project, at full buildout, is expected to result in a net increase of less than 1 MTCO_{2e} per year from area sources. Refer to Appendix B of this Final EIR for the supporting calculations that reflect the emission reduction measures.

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

**Table 4.6-9
Construction-Related Emissions
(MTCO₂e)**

Year	MTCO ₂ e ^a
2022	385
2023	1,889
2024	1,276
2025	1,539
Total	5,089
Amortized Over 30 Years	170
<p>^a CO₂e was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Appendix B of this Final EIR.</p> <p>Source: Eyestone Environmental, 2022.</p>	

4.6.3.4.1.2.2 Electricity and Natural Gas Generation Emissions

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

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for Southern California Edison were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on SoCal Edison projections for year 2026 (364 lbs. CO₂ per MWh). SoCal Edison's carbon intensity projections also take into account SB 100 and SB 350 RPS requirements for renewable energy.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating

Table 4.6-10
Annual GHG Emissions Summary (Project)^a
(metric tons of carbon dioxide equivalent [MTCO₂e])

Scope	Existing Emissions	Project Without Reduction Features	Project with Reduction Features	Net Change (Project Without Reduction Features – Baseline)	Net Change (Project With Reduction Features – Baseline)
Area ^c	<1	<1	<1	<1	<1
Energy ^d	68	991	954	922	886
Mobile ^e	359	2911	1,172	2,552	813
Stationary ^f	<1	1	1	1	1
Solid Waste ^g	6	65	65	58	58
Water/Wastewater ^h	8	46	46	38	38
Construction	<1	170	170	170	170
Total Emissions	442	4183	2,408	3,741	1,966

Numbers may not add up exactly due to rounding.

^a CO₂e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Final EIR. Totals may not add up due to rounding. Emissions for existing and Project scenarios are based on a 2026 buildout year.

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

^c Area source emissions are from landscape equipment

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

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

^f 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.

Source: Eyestone Environmental, 2022.

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.¹²⁶ The data are specific for climate zones; therefore, Zone 11 was selected for the Project Site based on the ZIP Code tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under 2016 Title 24 building codes. As discussed above, the Project would be subject to the 2019 Title 24 standards. Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards.¹²⁷ This analysis conservatively includes a 10-percent reduction in the CalEEMod calculated energy use to account for compliance with 2019 Title 24 standards.

The Project would implement project design feature GHG-PDF-1, which would require the Project to incorporate features to further reduce overall energy usage.

As shown in Table 4.6-10 on page 4.6-72, Project GHG emissions from electricity and natural gas usage would result in a total of 886 MTCO₂e per year, which reflects a 4-percent reduction in electricity and natural gas emissions with implementation of GHG-PDF-1.

4.6.3.4.1.2.2.3 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 trip generation rate estimates provided by Fehr and Peers in Appendix B, Detailed Trip Generation Rates, of the Project's Transportation Impact Report included in Appendix H of this Final EIR.¹²⁸ As discussed in Section 4.9, Transportation, of this Final EIR, the ITE Trip Generation factors were used with CalEEMod default trip lengths to calculate Project VMT and trip estimates based on the amount of building area.

¹²⁶ CEC, *Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010.*

¹²⁷ CEC, *2019 Building Energy Efficiency Standards, Fact Sheet.*

¹²⁸ *Fehr and Peers, Transportation Impact Report, Appendix B, Detailed Trip Generation Rates and Traffic Forecasts for Cheval Blanc Beverly Hills Specific Plan, January 29, September 2021.*

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 CalEEMod. The Project would develop new hotel, restaurant and retail uses on a site that is within an HQTAs and would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The Project Site is located approximately 0.4 mile walking distance from the future Metro D (formerly Purple) Line Rodeo Station and is served by Metro bus lines which are within 0.3 mile of the site; sidewalk improvements, free transit passes will be provided to hotel and club employees who commute by transit. Bicycle parking, including charging facilities for e-bicycles, as well as employee lockers and showers will be provided to encourage bicycle commuting. All of these measures would further reduce vehicle trips and VMT by encouraging use of transit, bicycling, walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive.

As shown in Table 4.6-10 on page 4.6-72, Project GHG emissions from mobile sources would result in a net increase of 813 MTCO_{2e} per year, when accounting for existing uses. Please refer to Appendix B of this Final EIR for the supporting calculations that reflect the emission reduction measures.

4.6.3.4.1.2.2.4 Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table 4.6-10, the Project scenario is expected to result in a total of 1 MTCO_{2e} per year from stationary sources.

4.6.3.4.1.2.2.5 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 4.6-10, Project GHG emissions from solid waste generation would result in a total of 58 MTCO_{2e} per year which accounts for a 60-percent recycling/diversion rate. This assumes a 60-percent waste diversion rate for both the Buildout with reducing measures and Buildout without reducing measures scenarios.

4.6.3.4.1.2.2.6 Water Usage and Wastewater Generation Emissions

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

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor¹²⁹ to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for Southern California Edison were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under 2016 California Plumbing Code, 2019 CALGreen, and reflect an approximately 20-percent reduction as compared to the base demand.¹³⁰ Base water use demand is determined by the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code.

As shown in Table 4.6-10 on page 4.6-72, Project GHG emissions from water/wastewater usage would result in a total of 38 MTCO_{2e} per year, which accounts for a 20-percent reduction in water/wastewater emissions, consistent with CalGreen, as compared to the Project without water conservation features. Refer to Appendix B of this Final EIR for the supporting calculations that reflect the emission reduction measures.

4.6.3.4.1.2.3 Combined Construction and Operational Impacts

As shown in Table 4.6-10, when taking into consideration implementation of relevant project design features, as well as the requirements set forth in the City's Building Code, and full implementation of current State mandates, the Project's GHG emissions for the Project in 2026 would result in 170 MTCO_{2e} per year (amortized over 30 years) during construction. With removal of existing uses, the Project would result in an increase of 1,796 MTCO_{2e} per year during operation of the Project. Project construction and operations would result in a combined total of 1,966 MTCO_{2e} per year.

¹²⁹ *The intensity factor reflects the average pounds of CO_{2e} per megawatt generated by a utility company.*

¹³⁰ *Base water demand calculated according to City of LA Ordinance No. 184248*

4.6.3.4.1.2.4 SCAQMD Screening Criteria Analysis

As noted above, while there are no local, regional, or statewide significance thresholds to measure GHG impacts for mixed-use project, the SCAQMD has proposed a draft screening criterion of 3,000 MTCO_{2e}/yr for mixed-use projects to determine whether a land use project could presumptively have less than significant GHG impacts if it produced less GHGs than the screening criteria. As discussed above, the Project's estimated annual emissions would be 1,966 MTCO_{2e} per year. Thus, the Project's GHG annual emissions would not exceed the 2008 SCAQMD draft screening threshold of significance of 3,000 MTCO_{2e} per year.

4.6.3.4.1.3 Conclusion

In summary, the Project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. More specifically, the plan consistency analysis provided above demonstrates that the Project complies with the plans, policies, regulations and GHG reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and subsequent updates, the 2020–2045 RTP/SCS, and the Sustainable City Plan. 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.**

4.6.3.4.2 Mitigation Measures

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

4.6.3.4.3 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.

4.6.3.5 Cumulative Impacts

4.6.3.5.1 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 4.6-10 on page 4.6-72 illustrates that implementation of the Project's regulatory requirements and project design features, including state mandates, would contribute to GHG reductions. These reductions support state goals for GHG emissions reduction.

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

4.6.3.5.2 Mitigation Measures

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

4.6.3.5.3 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.