IV. Environmental Impact Analysis
D. Greenhouse Gas Emissions

1. Introduction

This section of the Draft EIR provides a discussion of global climate change, existing regulations pertaining to global climate change, an inventory of the approximate greenhouse gas (GHG) emissions that would result from the proposed Project, and an analysis of the potential impact of these GHGs. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B to this Draft EIR.

2. Environmental Setting

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

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

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity,

[1] *USEPA, Climate Change: Basic Information, www.epa.gov/climatechange/basics/, accessed March 16, 2017.*

and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[3] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. With regard to emissions of non-CO_2 GHG, these have also increased significantly since 1990.[4] In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[5]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

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

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

[4] *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed March 17, 2017.*

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

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

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), "Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO_2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO_2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem."[7]

a. GHG Background

GHGs include CO_2, CH_4, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[8] Carbon dioxide is the most abundant GHG. Other GHGs are less abundant, but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. 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 GHGs is provided in Table IV.D-1 on page IV.D-4.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, 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 CO_2. The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. A summary of the atmospheric lifetime[9] and GWP of selected gases is presented in Table IV.D-2 on page IV.D-5. As indicated below, GWPs range from 1 to 22,800.

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

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

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

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

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	A flammable gas and is 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 from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at the 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 the Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

[a] *GHGs identified in this table are ones identified in the Kyoto Protocol, with the inclusion of NF_3,* which was *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; Environmental Protection Agency, Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride; January 2009.

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

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200

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 December 9, 2016.

b. Projected Impacts of Global Warming in California

According to the 2006 California Climate Action Team (CAT) Report, temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California associated with a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. If emissions from GHGs are not reduced substantially, the warming increase could have the following consequences in California:[10]

- The Sierra snowpack would decline between 70 and 90 percent by the end of the century, threatening California's water supply;
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes;

[10] *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 11.*

- Erosion of California's coastlines would increase, as well as sea water intrusion;
- Pest infestation and vulnerability to fires of the state's forests would increase; and
- Rising temperatures would increase power demand, especially in the summer season.

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 CO_2; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[11]

c. Regulatory Framework

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

(1) Federal

(a) Federal Clean Air Act

CO_2 and other GHGs have been determined to be 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. However, the USEPA is entitled to avoid taking action or enacting regulations if it finds that GHGs do not contribute to climate change or if it offers 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

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

USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[12] While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, the USEPA published its final rule deferring GHG permitting requirements for CO_2 emission from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups have challenged the deferral. In September 2011, USEPA released an "Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources," which analyzes accounting methodologies and suggests an implementation for biogenic CO_2 emitted from stationary sources.

On April 4, 2012, USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO_2 per MW-hour (CO_2/MWh) on an average annual basis, subject to certain exceptions.

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 currently are not regulated at the federal level.[13]

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[12] *USEPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule.*

[13] *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 March 17, 2017.*

(b) Federal 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 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 CO_2 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.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[14]

(c) Energy Independence and Security Act

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

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[14] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the proposed 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.*

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

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

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[15]

(2) State

(a) Executive Order S-3-05

Executive Order S-3-05, issued in June 2005, established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary for the California Environmental Protection Agency (CalEPA) to report every two years on the state's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California 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 reported several recommendations and strategies for reducing

[15] *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.*

GHG emissions and reaching the targets established in the Executive Order.[16] The statewide GHG targets are as follows:

- By 2010, reduce to 2000 emission levels;[17]
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

However, in adopting the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, discussed below, the Legislature has not yet adopted the 2050 horizon-year goal from Executive Order No. S-3-05.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" 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.[18]

(b) California Global Warming Solutions Act of 2006 (AB 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;[19] and
- By 2020, reduce to 1990 levels.

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

[17] *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.*

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

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

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that the California Air Resources Board (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.[20]

(c) Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* as required by AB 32.[21] The *Climate Change Scoping Plan* proposes 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."[22] The *Climate Change Scoping Plan* has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The *Climate Change Scoping Plan* calls for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions will be 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 will be encouraged and, sometimes, required to use energy more efficiently. Utility energy supplies will change to include more renewable energy sources through implementation of the Renewables Portfolio Standard.[23] Additionally, the *Climate Change Scoping Plan* emphasizes opportunities for households and businesses to save energy and money through increasing

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

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

[22] *CARB, Climate Change Scoping Plan, December 2008.*

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

energy efficiency. It indicates that substantial savings of electricity and natural gas will be accomplished through "improving energy efficiency by 25 percent."

The *Climate Change Scoping Plan* identifies a number of specific issues relevant to the proposed Project, including:

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

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

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

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

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (2014 Update).[24] The stated purpose of the 2014 Update is 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."[25] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line

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

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

with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.[26]

In conjunction with the 2014 Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050."[27] Those six areas are: (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 identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[28] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The 2014 Update discusses 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 2014 Update expresses CARB's commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target (Proposed 2017 Update) and a Draft Environmental Analysis (Draft EA) for public comment. Public comments were due March 6, 2017, and public board hearings were held June 2017, but the Proposed 2017 Update and Draft EA have not been adopted yet.[29]

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

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

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

[29] *CARB, Notice of Public Board Meetings and Public Comment Period on the Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, January 20, 2017.*

The Proposed 2017 Update builds upon the successful framework established by the initial Scoping Plan and the 2014 Update by outlining priorities and recommendations for the state to achieve a 40-percent reduction in GHG emissions by 2030 compared to 1990 levels consistent with Executive Order B-30-15, which is discussed further below.[30]

(d) Senate Bill 32

Senate Bill (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 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.

(e) Assembly Bill 197

Assembly Bill (AB) 197, a bill linked to SB 32, 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 greenhouse gases, 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 state 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 state legislature concerning the state's programs, policies, and investments related to climate change.

(f) Executive Order B-30-15

Executive Order B-30-15, issued in April 2015, established a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.[31]

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[30] *CARB, 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target, January 20, 2017.*

[31] *CARB, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

(g) Cap-and-Trade Program

The *Climate Change Scoping Plan* identifies a cap-and-trade program as one of the strategies for California to reduce GHG emissions. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be 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, and ultimately achieving an 80-percent reduction from 1990 levels by 2050.[32]

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. 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 CO_2e ($MTCO_2e$) per year. Triggering of the 25,000 $MTCO_2e$ 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 CO_2e of GHG they emit.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit 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*

[32] *With continuation of the Cap-and-Trade Program, the state can achieve a 40-percent reduction target by 2030.*

GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.

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

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

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.[33] […]

[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.[34]

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 under 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.

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[33] *CARB, 2014 Update, May 2014, p. 88.*

[34] *CARB, 2014 Update, May 2014, pp. 86–87.*

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.[35]

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

(h) Energy-Related Sources

(i) California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) program (2002, Senate Bill [SB] 1078) requires that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20-percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, California Governor Jerry Brown signed into law 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 2015, 24.3 percent of the electricity provided by Southern California Edison (SCE) was produced with renewable

[35] *Center for Climate and Energy Solutions, California Cap-and-Trade, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed February 10, 2017.*

power.[36] According to the CPUC, SCE is on pace to meet SB 2X's requirement with 36.9 percent of its 2020 power currently under contract coming from renewables.[37]

(ii) California Senate Bill 350

Senate Bill (SB) 350, which was signed into law on October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[38]

(iii) California Senate Bill 1368 (SB 1368)

SB 1368, a companion bill to AB 32, requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards will 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 CO_2 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 CO_2 per MWh (see CEC Order No. 07-523-7).

(i) Mobile Sources

(i) California Assembly Bill 1493 (Pavley I)

AB 1493, passed in 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the state. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On

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[36] *Southern California Edison, Our Renewable Power Summary for 2015, 2016, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed June 8, 2016.*

[37] *California Public Utilities Commission, California Renewables Portfolio Standard, 2016, www.cpuc.ca.gov/RPS_Homepage/, accessed June 8, 2016.*

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

September 24, 2009, CARB adopted amendments to these "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.[39] 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 2020 model year.[40] 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.

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

Executive Order S-1-07, the LCFS (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the LCFS have been directed to CARB. The LCFS has been identified by CARB as a discrete early action item in the adopted *Climate Change Scoping Plan*. CARB expects the LCFS to achieve the minimum 10-percent reduction goal; however, many of the early action items outlined in the *Climate Change Scoping Plan* work in tandem with one another. To avoid the potential for double-counting emission reductions associated with AB 1493 (see previous discussion), the *Climate Change Scoping Plan* has modified the aggregate reduction expected from the LCFS to 9.1 percent. In accordance with the *Climate Change Scoping Plan*, this analysis incorporates the modified reduction potential for the LCFS. 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.

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2015–2025.[41] The components of the Advanced Clean Car Standards include the Low-Emission Vehicle (LEV) regulations that

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

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

[41] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB January 18, 2017.*

reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[42] 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.[43]

(iv) California Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was passed by the State Assembly on August 25, 2008, and signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduce passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either that region's Region Transportation Plan or SCS. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

(j) Building Standards

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

The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in

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[42] *CARB, California's Advanced Clean Cars Program, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB January 18, 2017.*

[43] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, website: https://www.arb.ca.gov/newsrel/newsrelease.php?id=908, accessed April 4, 2017.*

California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

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

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations (CCR) 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.[44]

An update to Title 24 was adopted by the CEC on April 23, 2008. The 2008 Title 24 standards applied to building permits for which an application was submitted on or after January 1, 2010. The CEC adopted the changes made in 2008 to the Building Energy Efficiency Standards to respond to the mandates of AB 32 and to pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs. The CEC adopted the 2016 Title 24 standards, which became effective on January 1, 2017, and are applicable to the proposed Project.[45] The 2016 standards continue to improve upon the 2013 Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[46]

(iii) California Green Building Standards (CALGreen Code)

The 2016 California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2017. Most mandatory measure changes in the 2016 CALGreen Code from the previous 2013 CALGreen Code were related to the definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy that were added or revised affect electric vehicles chargers and charging and hot water recirculation systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional electric vehicle charging space requirements,

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[44] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed March 17, 2017.*

[45] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed March 17, 2017.*

[46] *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed March 17, 2017.*

including quantity, location, size, single EV space, multiple EV spaces, and identification.[47] For nonresidential mandatory measures, the table (Table 5.106.5.3.3) identifying the number of required EV charging spaces has been revised in its entirety.[48]

(k) California Senate Bill 97 (SB 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 to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

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

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.[49] 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:

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[47] *California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4—Residential Mandatory Measures, effective January 1, 2017.*

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

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

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.[50]

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."[51]

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. Senate Bill 97 applies retroactively to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

(3) Regional

(a) South Coast Air Quality Management District

The Southern California Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. 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;

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[50] *14 Cal. Code Regs. § 15064.4(b).*

[51] *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.*

- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[52] 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. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects); therefore, the commercial/residential thresholds have not yet been formally adopted.

(b) Southern California Association of Governments

SCAG recently adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.[53, 54] The 2016–2040 RTP/ SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016–2040 RTP/SCS's strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;[55]
- Develop "Complete Communities";

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

[53] *SCAG, Final 2016–2040 RTP/SCS.*

[54] *CARB, Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016.*

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

- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

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

The 2016–2040 RTP/SCS states that the SCAG region is home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs. By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. High Quality Transit Areas[56] (HQTAs) will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040. The 2016–2040 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

[56] *Defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours.*

The 2016–2040 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and 18 percent by 2035. This level of reduction would meet and exceed the region's GHG targets set by CARB of 8 percent per capita by 2020 and 13 percent per capita by 2035.[57] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS's GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[58] The 2016–2040 RTP/SCS would result in an estimated 21-percent decrease in per capita GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

(4) Local

CEQA Guidelines Section 15183.5 allows jurisdictions to analyze and mitigate the significant effects of GHGs at a programmatic level, by adopting a plan for the reduction of GHG emissions. The City of West Hollywood (City) published a Climate Action Plan (CAP) on September 6, 2011, "designed to address climate change and reduce the community's greenhouse gas emissions (GHG) emissions at the local level." The CAP outlines a course of action to reduce municipal and community-wide GHG emissions that contribute to climate change. The CAP seeks to:

- Provide a clear guidance to City staff and decision-makers regarding when and how to implement key actions to reduce GHG emissions;
- Place the City on a path to reduce annual community-wide GHG emissions by 20 to 25 percent below 2008 business-as-usual (BAU) emissions levels by 2035;
- Inspire residents, property owners, and businesses to participate in community efforts to reduce GHG emissions; and
- Demonstrate the City's ability to respond and comply with California GHG reduction legislation and guidelines.

The CAP also includes the following climate action strategies and emission reductions measures applicable to the proposed Project:

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[57] *SCAG, Final 2016–2040, RTP/SCS, Executive Summary, p. 8, April 2016.*

[58] *SCAG, Final Program Environmental Impact Report for 2016–2040, RTP/SCS, April 2016, Figure 3.8.4-1.*

- LU-1.1: Facilitate the establishment of mixed-use, pedestrian- and transit oriented development along the commercial corridors and in Transit Overlay Zones.

- T-1.1: Increase the pedestrian mode share in West Hollywood with convenient and attractive pedestrian infrastructure and facilities.

- T-2.2: Install bike racks and bike parking in the City where bike parking infrastructure currently does not exist.

- E-2.2: Require all new construction to achieve California Building Code Tier II Energy Efficiency Standards (Section 503.1.2).

- E-3.2: Require the use of recycled materials for 20 percent of construction materials in all new construction.

- E-3.3: Facilitate the installation of solar photovoltaic systems on multi-family residential, commercial, and industrial buildings, and parking lots.

- W-1.1: Reduce per capita water consumptions by 30 percent by 2035.

The CAP also states that GHG emissions reductions from the strategies within the CAP and statewide reductions have the potential to reduce GHG emissions by approximately 16.9 percent below 2008 emissions levels in 2020. Thus, the CAP would exceed the City's GHG reduction target of 20 to 25 percent below 2008 emission levels by 2035, as stated above.[59]

(a) City of West Hollywood Green Building Ordinance

The City adopted one of the nation's first green building ordinances which became effective on October 1, 2007. All remodels, tenant improvements, additions, and new construction after that date are required to comply with the City of West Hollywood Green Building Ordinance. A number of the standards included in the ordinance, such as requiring energy efficient appliances, directly affect greenhouse gas emissions in the City. Development projects must achieve a score of at least 60 on the City's Green Building Checklist to comply with the ordinance.

[59] *City of West Hollywood Climate Action Plan, September 2011, page 3-2.*

(b) City of West Hollywood General Plan

Global climate change and greenhouse gas emissions are addressed in the conservation element of the West Hollywood General Plan, which is included in the Infrastructure, Resources, and Conservation chapter. The following goals and policies related to greenhouse gas emissions apply to the proposed Project:

- Policy IRC-3.6: Require all new buildings to meet the following standards:
  - Achieve a reduction of water use of 40 percent less than baseline for buildings as calculated by the Energy Policy Act of 1992.
  - Reduce water consumption for outdoor landscape irrigation, consistent with the most recent City policy (see Chapter 15.52, Water Conservation Plan, in the City's Municipal Code).
  - Comply with all prevailing state laws and City regulations regarding indoor and outdoor water conservation and efficiency in new construction.
- Policy IRC-4.1: Promote building energy efficiency improvements through strategies that may include the following:
  - Retrofits of existing buildings with energy efficiency technology
  - Expanded public outreach in partnership with Southern California Edison on energy efficiency upgrades
  - A voluntary energy audit program for residents and businesses
  - Diverse incentives for energy efficiency
- Policy IRC-4.2: Promote land use patterns and mobility decisions that result in reduced vehicle trips and therefore reduced overall energy use from the transportation sector.
- Goal IRC-6: Reduce the City's contribution to global climate change, and adapt to its effects.
- Policy IRC-6.2: Lead by example in reducing municipal GHG emissions.
- Policy IRC-6.4: Develop GHG emissions reduction strategies that are rationally related to the sources of emissions identified in the inventory.
- Policy IRC-6.5: Develop adaptation strategies to address the impacts of climate change upon the West Hollywood community and the Los Angeles Metropolitan Region.

- Policy IRC-6.6: Expand the tree canopy citywide to provide relief from rising temperatures and the head island effect, and to sequester carbon and help purify the air from emissions related to smog formation.

- Policy IRC-6.7: Implement heat island reduction strategies, including but not limited to strategies to increase permeable surfaces in the streetscape and buildings, increased vegetation and shade, and the use of reflective materials in the streetscape and buildings.

- Policy IRC-6.8: Implement policies in the Urban Form and Land Use Chapter of the City's General Plan that reduce building and transportation-related greenhouse gas emissions.

- Policy IRC-6.9: In conjunction with policies in the Mobility Chapter of this General Plan, encourage a shift in travel from single-occupant autos to walking, biking, public transit, and ride-sharing, with a focus on policies that promote the following:

  - Increase walking and biking within the City

  - Increase transit use and reduce barriers to transit ridership

  - Increase ride-sharing

  - Promote alternatives to automobile ownership

- Policy IRC-6.10: Implement policies in this Infrastructure, Resources, and Conservation Chapter that reduce greenhouse gas emissions related to water and wastewater, energy, green building, recycling, and solid waste, and facilities for City operations, including policies that accomplish the following:

  - Reduce energy associated with the use, treatment, and conveyance of water and wastewater

  - Improve energy efficiency in existing buildings

  - Ensure high levels of energy performance in new construction

  - Maximize the use of renewable energy

  - Reduce the amount of waste sent to landfills

  - Improve energy efficiency and increase energy conservation within city facilities.

- Policy IRC-6.11: In conjunction with policies in the Parks and Recreation and Land Use and Urban Form Chapters of the City's General Plan, increase green

spaces throughout the City and provide carbon capture through trees, vegetation, and open space.

- Policy IRC-7.2: Support land use and transportation strategies to reduce driving rates and resulting air pollution, including pollution from commercial and passenger vehicles.
- Policy IRC-7.3: Promote fuel efficiency and cleaner fuels for vehicles as well as construction and maintenance equipment by requesting that City contractors provide cleaner fleets.
- Policy IRC-7.4: Prohibit combustion or gasoline powered engines in leaf blowers.
- Policy IRC-7.5: Discourage the use of equipment with two-stroke engines and publicize the benefits and importance of alternative technologies.
- Policy IRC-7.6: Support increased local access to cleaner fuels and cleaner energy by encouraging fueling stations that provide cleaner fuels and energy to the community.

d. Existing Conditions

(1) Existing Statewide GHG Emissions

GHGs 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, the Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes 1.4 percent of global and 6.2 percent of national GHG emissions.[60] California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California are CO_2 produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2012.[61] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The GHG

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

[61] *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.*

inventory for California for years 2006 through 2012 is presented in Table IV.D-3 on page IV.D-32. As shown in Table IV.D-3, the GHG inventory for California in 2012 was 458.7 million $MTCO_2e$.

(2) Existing Project Site Emissions

GHGs 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, the Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes 1.4 percent of global and 6.2 percent of national GHG emissions.[62] California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California are CO_2 produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2012.[63] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. The GHG inventory for California for years 2006 through 2012 is presented in Table IV.D-3. As shown in Table IV.D-3, the GHG inventory for California in 2012 was 458.7 million $MTCO_2e$.

(3) Existing Project Site Emissions

The Project Site is currently occupied with a 19,670-square-foot, two-story commercial building with surface and subterranean parking that is accessed from Hilldale Avenue. Landscaping within the Project Site is limited, with ornamental landscaping and small trees planted in concrete planter boxes along Sunset Boulevard and Hilldale Avenue.

Area source emissions 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,

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

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

Table IV.D-3
California GHG Inventory
(million metric tons CO_2e)

	2006	2007	2008	2009	2010	2011	2012
Transportation	**189.18**	**189.27**	**178.02**	**171.47**	**170.46**	**168.13**	**167.38**
On Road	172.37	172.41	163.00	158.46	157.38	154.91	154.06
Passenger Vehicles	131.79	130.80	124.27	122.41	121.39	118.85	118.28
Heavy Duty Trucks	40.58	41.61	38.73	36.04	36.00	36.06	35.78
Ships & Commercial Boats	4.20	4.31	4.04	3.68	3.71	3.72	3.83
Aviation (Intrastate)	4.57	4.98	4.51	4.04	3.85	3.75	3.72
Rail	3.53	3.17	2.38	1.94	2.33	2.49	2.48
Off Road	3.32	3.18	2.82	2.25	2.03	2.13	2.23
Unspecified	1.20	1.22	1.27	1.10	1.16	1.14	1.06
Percent of Total Emissions	*39%*	*39%*	*37%*	*37%*	*38%*	*37%*	*36%*
Electric Power	**104.54**	**113.94**	**120.15**	**101.32**	**90.30**	**88.04**	**95.09**
In-State Generation	49.86	54.13	54.32	53.28	46.71	41.18	51.02
Natural Gas	43.07	47.12	48.02	46.08	40.59	35.92	45.77
Other Fuels	5.64	5.86	5.16	5.85	5.02	4.01	4.44
Fugitive and Process Emissions	1.15	1.16	1.14	1.34	1.10	1.25	0.82
Imported Electricity	54.68	59.81	65.82	48.04	43.59	46.86	44.07
Unspecified Imports	27.95	32.73	37.92	14.99	13.45	15.52	17.48
Specified Imports	26.73	27.08	27.90	33.05	30.14	31.34	26.59
Percent of Total Emissions	*22%*	*23%*	*25%*	*22%*	*20%*	*20%*	*21%*
Commercial and Residential	**41.89**	**42.11**	**42.44**	**42.65**	**43.82**	**44.32**	**42.28**
Residential Fuel Use	28.58	28.73	29.07	28.69	29.42	29.89	28.09
Natural Gas	26.60	26.73	26.67	26.31	27.04	27.51	25.76
Other Fuels	1.98	2.01	2.40	2.38	2.39	2.38	2.33
Commercial Fuel Use	12.89	12.88	13.00	13.04	13.48	13.65	13.44
Natural Gas	11.62	11.49	11.16	11.02	11.19	11.33	11.24
Other Fuels	1.27	1.40	1.83	2.02	2.29	2.32	2.19
Commercial Cogeneration Heat Output	0.42	0.49	0.37	0.92	0.92	0.78	0.76
Percent of Total Emissions	*9%*	*9%*	*9%*	*9%*	*10%*	*10%*	*9%*
Industrial	**90.28**	**87.10**	**87.54**	**84.95**	**88.51**	**88.34**	**89.16**
Refineries	29.65	29.21	28.42	28.34	30.39	30.12	29.88
General Fuel Use	15.96	14.77	16.00	15.56	17.98	19.14	18.87
Natural Gas	12.38	11.56	12.37	11.46	13.46	14.48	14.30
Other Fuels	3.58	3.20	3.63	4.10	4.52	4.66	4.56
Oil & Gas Extraction[a]	16.94	17.00	18.22	17.12	16.18	16.22	16.86
Fuel Use	15.75	15.78	17.03	15.92	15.01	14.91	15.50
Fugitive Emissions	1.19	1.21	1.20	1.20	1.17	1.31	1.36

Table IV.D-3 (Continued)
California GHG Inventory
(million metric tons CO_2e)

	2006	2007	2008	2009	2010	2011	2012
Cement Plants	9.74	9.14	8.63	5.72	5.56	6.14	6.92
Clinker Production	5.80	5.55	5.28	3.60	3.46	4.08	4.65
Fuel Use	3.95	3.59	3.34	2.12	2.10	2.06	2.26
Cogeneration Heat Output	12.17	11.16	10.40	12.55	12.60	11.14	10.82
Other Process Emissions	5.83	5.83	5.87	5.65	5.80	5.59	5.82
Percent of Total Emissions	*19%*	*18%*	*18%*	*19%*	*20%*	*20%*	*19%*
Recycling and Waste	**7.80**	**7.93**	**8.09**	**8.23**	**8.34**	**8.42**	**8.49**
Landfills[b]	7.42	7.53	7.66	7.78	7.86	7.92	7.97
Percent of Total Emissions	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
High Global Warming Potential	**11.08**	**11.78**	**12.87**	**13.99**	**15.89**	**17.35**	**18.41**
Ozone Depleting Substance Substitutes	10.41	11.16	12.24	13.49	15.36	16.58	17.73
Electricity Grid SF6 Losses[c]	0.28	0.26	0.27	0.26	0.24	0.24	0.23
Semiconductor Manufacturing[b]	0.39	0.36	0.36	0.23	0.29	0.53	0.45
Percent of Total Emissions	*2%*	*2%*	*3%*	*3%*	*4%*	*4%*	*4%*
Agriculture[d]	**37.75**	**37.03**	**37.99**	**35.84**	**35.73**	**36.34**	**37.86**
Livestock	22.22	23.73	24.09	23.88	23.35	23.38	23.92
Enteric Fermentation (Digestive Process)	11.24	11.93	11.89	11.71	11.51	11.49	11.78
Manure Management	10.98	11.80	12.20	12.17	11.84	11.89	12.14
Crop Growing & Harvesting	10.20	9.50	9.98	9.31	9.57	9.30	10.22
Fertilizers	8.01	7.49	8.04	7.32	7.58	7.25	8.16
Soil Preparation and Disturbances	2.12	1.94	1.87	1.92	1.91	1.98	1.98
Crop Residue Burning	0.07	0.07	0.07	0.07	0.08	0.08	0.08
General Fuel Use	5.33	3.80	3.92	2.65	2.81	3.66	3.72
Diesel	3.87	2.68	3.00	1.79	1.99	2.37	2.47
Natural Gas	0.88	0.79	0.75	0.69	0.65	0.66	0.70
Gasoline	0.57	0.32	0.17	0.17	0.17	0.63	0.55
Other Fuels	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Total Emissions	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*	*8%*
Total Net Emissions	**482.52**	**489.16**	**487.10**	**458.44**	**453.06**	**450.94**	**458.68**

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

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

[c] *This category is listed in the Electric Power sector of ARB's GHG Emission Inventory sectors.*

[d] *Reflects use of updated USEPA models for determining emissions from livestock and fertilizers.*

Source: California GHG Inventory for 2000–2012—by Category as Defined in the Climate Change Scoping Plan million metric tons of CO_2e—(based upon IPCC Second Assessment Report's Global Warming Potentials).

mobile source emissions from the existing uses are generated by motor vehicle trips to and from the Project Site. Additionally, waste sources emissions are from solid waste generated at the Project Site. Further, waste source emissions are generated from water used on the Project Site. Table IV.D-4 below presents the GHG emissions associated with the existing land uses.

Table IV.D-4
Existing (2016) Project Site Annual GHG Emissions Summary

Scope	Metric Tons of Carbon Dioxide Equivalent [a] ($MTCO_2e$)
Area	<1
Energy	127
Mobile	552
Stationary	<1
Solid Waste	22
Water/Wastewater Generation	13
Total Emissions	715

Numbers may not add up exactly due to rounding.

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Draft EIR.*

Source: Eyestone Environmental, 2017.

3. Project Impacts

a. Methodology

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.[64] The General Reporting Protocol is based on the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[65] Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework

[64] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

[65] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

for calculating and reporting GHG emissions from the proposed Project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements.

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

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).[66]

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.[67] For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate… GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[68] Therefore, direct and indirect emissions have been calculated for the proposed Project.

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[66] *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.*

[67] *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.*

[68] *OPR Technical Advisory, p. 5.*

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 project because the 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 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 a project is not implemented. Moreover, although the proposed Project is expected to emit GHGs, the emission of greenhouse gases by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHGs from more than one project and many sources in the atmosphere that may result in global climate change. A project's GHG emissions typically would be very small in comparison to state or global greenhouse gas emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. As such, a project's GHG emissions and the resulting significance of potential impacts are more properly assessed on a cumulative basis. Therefore, the significance of potential impacts from the proposed Project's GHG emissions is determined on a cumulative basis.

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 provide 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.[69]

(1) Construction

The proposed Project's construction emissions were calculated using CalEEMod Version 2016.3.1 and include emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. Details of the modeling assumptions and emission factors are provided in Appendix B of this Draft EIR. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from SCAQMD. The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to

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

remove existing structures, pavement, grade and excavate the Project Site, construct the proposed building and related improvements, and plant new landscaping within the Project Site.

In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the proposed Project. The SCAQMD defines the lifetime of a project as 30 years.[70] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(2) 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.

With regard to area source emissions, the emissions for landscaping equipment are based on the size of the proposed land uses (e.g., square footage), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Emissions of GHGs associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. 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 proposed Project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the proposed Project's Traffic Impact Study and included as Appendix B of this Draft EIR.[71] 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.

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

[71] *Gibson Transportation Consulting, Inc., Draft Transportation Study for the Arts Club West Hollywood Project, West Hollywood, CA, June 2017.*

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

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

The GHG emissions related to water usage and wastewater generation are based on the size of the 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, and the GWP values for the GHGs emitted.

The GHG emissions calculations for the proposed Project include credits or reductions for the project design features set forth in this Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates expected to be in force in 2020 (e.g., Pavley I Standards, full implementation of California's Statewide Renewables Portfolio Standard beyond current levels of renewable energy, and the California LCFS). 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 the proposed Project's emissions conservatively did not include actions and mandates that are not already in place, but are expected to be in force in 2020 (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, emissions reductions regarding cap-and-trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the proposed Project's GHG emissions at buildout because the state is expected to implement a number of policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the state's long-term climate goals. Project emissions presented below in Table IV.D-6 on page IV.D-45 represent buildout of the proposed Project less baseline conditions during the buildout year.

(3) Comparison to SCAQMD Screening Criteria

SCAQMD does not currently have an adopted bright line quantitative threshold to measure GHG impacts for commercial projects. However, as noted above, SCAQMD identified (in its tiered approach) a screening criterion of 3,000 $MTCO_2e$ per year for commercial projects. If a land use project is below this screening criterion, then it is presumed to have a less-than-significant GHG impact. The screening criterion is not

intended to be the sole determination of significance. Accordingly, the analysis below assessed the proposed Project against this screening criterion and also analyzed whether the proposed Project is consistent with applicable regulatory programs designed to reduce GHG. A quantitative comparison of Project emissions is evaluated below against the SCAQMD screening criterion.

(4) Consistency with Applicable Plans and Policies

A consistency analysis is provided, which describes the proposed Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of the *Climate Change Scoping Plan*, Regional Transportation Plan/Sustainable Communities Strategy, and the City's CAP.

b. Thresholds of Significance

The CEQA Guidelines, Appendix G (Environmental Checklist) includes the following two questions relating to the effects of GHGs:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

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

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be

analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).[72]

As discussed above, the SCAQMD does not currently have an adopted bright line quantitative threshold to measure GHG impacts for commercial projects. However, SCAQMD identified (in its tiered approach) a screening criterion of 3,000 $MTCO_2e$ per year for commercial projects. If a land use project is below this screening criterion, then it is presumed to have a less-than-significant GHG impact. The screening criterion is not intended to be the sole determination of significance. In addition, CARB and the City of West Hollywood have yet to adopt project-level significance thresholds for GHG emissions that would be applicable to the proposed Project.

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.[73] 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.[74] 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."[75] 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 and/or other regulatory schemes to reduce GHG emissions.[76] The City of West Hollywood's CAP is considered a qualified plan.

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

[73] *14 CCR § 15064(h)(3).*

[74] *14 CCR § 15064(h)(3).*

[75] *14 CCR § 15064(h)(3).*

[76] *See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance tor Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA…" Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact*

(Footnote continued on next page)

In the absence of any adopted numeric threshold, the significance of the proposed Project's GHG emissions is evaluated herein consistent with CEQA Guidelines Section 15064.4(b) by considering whether the proposed Project complies with applicable regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. For land use development projects, such as the proposed Project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016–2040 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 consistency with regulations or requirements adopted by the AB 32 *Climate Change Scoping Plan*, and the City of West Hollywood's CAP.

c. Project Design Features

The proposed Project would implement the following specific project design features with regard to GHG emissions:

Project Design Feature D-1: The proposed Project shall achieve 90 points in the City's Green Points System, which exceeds the 60 points required for compliance, and would achieve Leadership in Energy and Environmental Design (LEED) Gold certification by the U.S. Green Building Council or satisfy equivalent green building standards.

Project Design Feature D-2: The proposed Project shall achieve 15 percent better than the minimum standards of the California Energy Code.

In addition, the proposed Project would provide a mix of compatible infill and higher density uses to reduce vehicle trips, promote alternatives to individual vehicle travel and promote efficient delivery of services and goods, all of which would help reduce GHG emissions in comparison to a project without such characteristics. The proposed Project would also concentrate new employment and retail uses near the transportation corridors of Sunset Boulevard, San Vicente Boulevard, and Santa Monica Boulevard, and in close proximity to public transit opportunities (e.g., light rail and bus routes), thereby minimizing

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Report that demonstrate the SCAQMD has applied its 10,000 $MTCO_2e$ /yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See SCAQMD, Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration tor Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).

vehicle trips and GHG emissions. Please refer to Section IV.J., Traffic, Access, and Parking, of this Draft EIR for more details regarding the traffic-related features that would serve to reduce VMTs and corresponding GHG emissions.

In addition, as part of the proposed Project, the Applicant would incorporate a range of project features to further support and promote environmental sustainability, which are detailed in Section II, Project Description, of this Draft EIR and would include water conservation and waste reduction measures as set forth in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, and Section IV.K.3, Utilities and Service Systems—Solid Waste, of this Draft EIR, respectively. The proposed Project would also comply with all applicable state and local regulatory requirements, including the provisions set forth in the City's Green Building Ordinance.

d. Project Emissions

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

The proposed Project would generate an incremental contribution to and cumulative increase in sources of GHGs, however, as noted above, on an individual level, the proposed Project's GHG emissions would have no significant direct impact on climate change and would not be considered substantial when compared to statewide greenhouse

gas emissions. Therefore, the analysis of the proposed Project's GHG emissions and the resulting significance of potential impacts are assessed on a cumulative basis. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

(1) Construction

As described in Section II, Project Description, of this Draft EIR, Project construction is anticipated to occur in a single phase over 32 months, beginning in late 2017/early 2018 and ending in 2020. Construction of the proposed Project would consist of demolition of the existing buildings and the surface and subterranean parking areas, followed by excavation/grading, foundation, building construction, and landscaping. The proposed Project proposes the export of 48,000 cubic yards of export material (e.g., concrete and asphalt surfaces) and soil from the Project Site. The emissions of GHGs associated with construction of the proposed Project were calculated for each year of construction activity (i.e., 2017 through 2020 from on-site and off-site emission sources). A summary of GHG emissions for each year of construction is presented in Table IV.D-5 on page IV.D-44.

As presented in Table IV.D-5, construction of the proposed Project is estimated to generate a total of 1,668 $MTCO_2e$. As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the proposed Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the operational emissions analysis below. As recommended by the SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the proposed Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the proposed Project's operational emissions) in order to determine the proposed Project's annual GHG emissions inventory.[77] A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Appendix B of this Draft EIR.

(2) Operation

(a) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment. As shown in Table IV.D-6 on

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

Table IV.D-5
Construction-Related Emissions
($MTCO_2e$)

Year	$MTCO_2e$[a]
2017	66
2018	761
2019	525
2020	317
Total	1,668
Amortized Over 30 Years	56

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Appendix B of this Draft EIR.*

Source: Eyestone Environmental, 2017.

page IV.D-45, the proposed Project, at full buildout, is expected to result in less than one $MTCO_2e$ per year from area sources.

(b) 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 CO_2 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 SCE were selected in CalEEMod. 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 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.

Table IV.D-6
Annual GHG Emissions Summary (Buildout)[a]
(metric tons of carbon dioxide equivalent [$MTCO_2e$])

Scope	Project
Area[b]	<1
Energy[c]	428
Mobile	1,762
Stationary[d]	3
Solid Waste[e]	218
Water/Wastewater[f]	63
Construction	56
Total Emissions	**2,529**

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Draft EIR. Emissions provided in the table represent buildout of the proposed Project less baseline conditions during the buildout year.*

[b] *Area source emissions are from landscape equipment.*

[c] *Energy source emissions are based on CalEEMod default electricity and natural gas usage rates. Emissions provided in this table account for implementation of Project Design Feature D-1 and D-2 as well as compliance with regulatory requirements including 2016 Title 24 standards and Green Building Ordinance compliance.*

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

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

[f] *Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates.*

Source: Eyestone Environmental, 2017.

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.[78] 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, adjustments have been made to account for changes to Title 24 building codes but do not reflect 2016 Title 24 standards. For the Project scenario, an adjustment was made to account for the 2016 Title 24 standards. New building construction subject to 2016 Title 24 standards are 28 percent more efficient (for electricity)

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

than residential construction built to the 2013 Title 24 standards and 5 percent more efficient (for electricity) for non-residential construction.[79]

The amount of energy used by the proposed Project would be reduced in compliance with the City of Wet Hollywood's Green Building Ordinance and the following project design features. Specifically, Project Design Feature D-1 would require the proposed Project to achieve 90 points in the City's Green Points System and would achieve a LEED Gold equivalency standard (e.g., use of Energy Star appliances and reduce electricity associated with lighting by 15 percent in comparison to code requirements). Project Design Feature D-2 would require a reduction in electricity and natural gas usage with Title 24 sources by 15 percent.

As shown in Table IV.D-6 on page IV.D-45, Project GHG emissions from electricity and natural gas usage would result in a total of 428 $MTCO_2e$ per year and accounts for a 22-percent reduction in energy source emissions with implementation of Project Design Features D-1 and D-2, in comparison to a project without these characteristics.[80]

(c) Mobile Source Emissions

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

Mobile source operational GHG emissions were calculated using CalEEMod based on the proposed Project trip-generation estimates provided by Gibson Transportation, Inc..[81] As discussed in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, As discussed in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, to calculate daily trips, the amount of building area for proposed Project's variety of new uses, including art gallery, creative office, and retail uses as well as the uses associated with the Arts Club, including guestrooms, restaurants, lounges, bars, screening rooms, a supper club, fitness/spa facilities, and a rooftop deck with a swimming pool, changing rooms, a bar and dining space, and an emergency helipad, were multiplied by the applicable trip-generation rates based on the Institute of Transportation Engineers' (ITE) *Trip Generation, 9th Edition*. Daily trips were also calculated based on the number of visitors, members, and guests

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[79] *CEC, Adoption Hearing, 2016 Building Energy Efficiency Standards.*

[80] *For reduction calculations, see Appendix B of this Draft EIR.*

[81] *Gibson Transportation Consulting, Inc., Draft Transportation Study for the Arts Club West Hollywood Project, West Hollywood, CA, June 2017.*

visiting the Project Site and the number of employees. These rates were based on recent studies and discussions with the City of West Hollywood Staff.[82] The subterranean parking garage would not generate additional vehicle trips other than those trips generated by the proposed Project's creative office, retail, restaurant / dining and other land uses and thus, were not factored into the calculations.

The proposed Project trip-generation accounts for design characteristics that would reduce trips and VMT as compared to a standard project within the air basin as measured by the air quality model (CalEEMod). The proposed Project represents an infill development within an existing urbanized area that would concentrate new development within an HQTA. Trip reduction measures include internal capture and non-auto modes. As further discussed in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, these trip reduction credits are based on the proposed Project land uses and the location of the Project Site.

As shown in Table IV.D-6 on page IV.D-45, proposed Project GHG emissions from mobile sources would result in a total of 1,812 MTCO2e per year, which accounts for a 19-percent reduction in mobile source emissions accounting for the design characteristics of the proposed Project, in comparison to a project without these characteristics.[83]

(d) Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated the proposed Project would include an emergency generator on-site. As shown in Table IV.D-6, the proposed Project scenario is expected to result in a total of 3 $MTCO_2e$ per year from stationary sources.

(e) Solid Waste Generation Emissions

The proposed Project would generate solid waste and would therefore result in CO_2e emissions associated with landfill off-gassing. 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

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[82] *Trip generation for the members-only uses included in the Project were conservatively estimated based on empirical data from Arts Club London and the anticipated unique operational characteristics of the proposed Project (i.e., the proposed Project's land use components, membership levels, anticipated member/guest and employee arrival and departure patterns, events, and other programming). For a more detail discussion, refer to Appendix B of the Draft EIR.*

[83] *For reduction calculations, see Appendix B of this Draft EIR.*

generation rates for each applicable land use were selected for this analysis. As shown in Table IV.D-6 on page IV.D-45, Project GHG emissions from solid waste generation would result in a total of 218 $MTCO_2e$ per year.

(f) Water Usage and Wastewater Generation Emissions

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

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor[84] 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 SCE were selected in CalEEMod.

As shown in Table IV.D-6, Project GHG emissions from water/wastewater usage would result in a total of 63 $MTCO_2e$ per year, which accounts for a 20-percent reduction in water/wastewater emissions consistent with the City of West Hollywood Green Building Ordinance and implementation of Project Design Feature K.1-1 (e.g., fixtures to be more efficient than the CALGreen flowrate) provided in Section IV.K.1-1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.[85]

e. Analysis of Project Impacts

(1) Combined Construction and Operational Impacts

As shown in Table IV.D-6, the proposed Project in 2020 would result in an approximate 19-percent reduction in GHG emissions when taking into consideration implementation of project design features provided throughout this Draft EIR, including the requirements set forth in the City of West Hollywood Green Building Ordinance and the full

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

[85] *For reduction calculations, see Appendix B of this Draft EIR.*

implementation of current state mandates.[86] For comparison purposes, the City determined that GHG emissions reductions from the strategies within the CAP and statewide reductions have the potential to reduce GHG emissions by approximately 16.9 percent below 2008 emissions levels in 2020. The GHG emissions for the proposed Project would equal 56 $MTCO_2e$ per year during construction and 2,473 $MTCO_2e$ per year during operation of the proposed Project with a combined net total of 2,529 $MTCO_2e$ per year.

(2) SCAQMD Screening Criteria Analysis

As noted above, SCAQMD identified a screening criterion of 3,000 $MTCO_2e$ per year for commercial projects to determine whether a land use project could presumptively have less than significant GHG impacts if it produced less GHGs than the screening criterion. As shown in Table IV.D-6 on page IV.D-45, the proposed Project would result in 2,529 $MTCO_2e$[87] per year for combined construction and operational GHGs. The proposed Project would produce less GHGs (i.e., 3,000 $MTCO_2e$/yr screening criterion compared to 2,529 $MTCO_2e$ per year Project GHGs) than the screening criteria under the draft SCAQMD. Under the SCAQMD's proposed screening criteria, projects that emit fewer than 3,000 MTCO2e per year would be assumed to have a less than significant impact on climate change. An analysis of the proposed Project's consistency with applicable plans and policies is also provided below.

(3) Consistency with Applicable Plans and Policies

As described above, compliance with a GHG emissions reduction plan would result in a less-than-significant project and cumulative impact. The following section describes the extent the proposed Project complies with or exceeds the performance-based standards included in the regulations outlined in the *Climate Change Scoping Plan*, the Regional Transportation Plan/Sustainable Communities Strategy, and the City of West Hollywood CAP. As shown herein, the proposed Project would be consistent with the applicable GHG reduction plans and policies.

(a) Climate Change Scoping Plan

The goal to reduce GHG emissions to 1990 levels by 2020 (Executive Order S-3-05) was codified by the Legislature as the 2006 Global Warming Solutions Act (Assembly

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[86] *For reduction calculations, see Appendix B of this Draft EIR.*

[87] *Project emissions presented in Table IV.D-6 on page IV.D-48 represent buildout of the proposed Project less baseline conditions during the buildout year.*

Bill 32). In 2008, CARB approved a Climate Change Scoping Plan as required by AB 32.[88] The Climate Change Scoping Plan proposes 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."89 The Climate Change Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce project-related GHG emissions.

As shown in Table IV.D-6 on page IV.D-45, the proposed Project would result in 2,529 MTCO2e annually. The breakdown of emissions by source category shows approximately less than 1 percent from area sources; 17 percent from energy consumption; 70 percent from mobile sources; less than 1 percent from stationary sources; 8 percent from solid waste generation; 2 percent from water supply, treatment, and distribution; and 2 percent from construction activities. Provided in Table IV.D-7 on page IV.D-51 is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the proposed Project's design features comply with or exceed the reduction actions/strategies outlined in the Climate Change Scoping Plan.[90]

(b) 2016–2040 RTP/SCS

The purpose of SB 375 is to implement the state's greenhouse gas (GHG) emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Specifically, the Sustainable Communities Strategy (SCS) is required to demonstrate how the region will meet regional GHG reduction targets, as adopted by the California Air Resources Board (CARB). Under SB 375, the primary goal of the SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the SCS identifies various strategies to reduce per capita vehicle miles traveled (VMT).

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

[89] *Climate Change Scoping Plan, CARB, December 2008.*

[90] *An evaluation of stationary sources is not necessary as the stationary sources emissions will be created by emergency generators which would only be used in an emergency.*

Table IV.D-7
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Area (Less than 1 percent of project inventory)		
SCAQMD Rule 445 (Wood Burning Devices): Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	**Consistent.** The proposed Project does not include any residential uses, and no wood burning cooking stoves or fireplaces are proposed with the proposed Project.
Energy (17 percent of project inventory)		
California Renewables Portfolio Standard (RPS) program: Senate Bill 2X 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 Senate Bill 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.	Southern California Edison	**Consistent.** According to the 2014 Power Content Label, SCE indicated that 24 percent of its electricity came from renewable resources in Year 2013.[a] As SCE would provide electricity service to the Project Site, the proposed Project would use electricity that is produced consistent with this performance-based standard. Electricity GHG emissions provided in Table IV.D-6 on page IV.D-45 assume that SCE will receive at least 33 percent of their electricity from renewable sources by the year 2020.
Senate Bill 350 (SB 350): The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030 and also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.[b]	State Energy Resources Conservation and Development Commission and Southern California Edison	**Consistent.** SCE would be required to generate electricity that would increase renewable energy resources to 50 percent by 2030. As SCE would provide electricity service to the Project Site, the proposed Project, by 2030, would use electricity consistent with the requirements of SB 350. Project buildout would occur in Year 2020 and, therefore, the estimated GHG emissions from electricity usage provided above conservatively do not include implementation of SB 350 with a compliance date of 2030. Electricity GHG emissions presented in Table IV.D-6 on page IV.D-45 would be further reduced by Year 2030 as the electricity provided to the Project Site would meet the requirements under 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 the CCR, Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		appliances, heating, ventilation, and air-conditioning (HVAC) systems and insulation. The proposed Project would further support this action/strategy as it includes Project Design Feature D-1 which would require the proposed Project to achieve 90 points in the City's Green Points System and would achieve a LEED Gold equivalency standard (e.g., use of Energy Star appliances and reduce electricity associated with lighting by 15 percent in comparison to code requirements). Project Design Feature D-2 would require a reduction in electricity and natural gas usage with Title 24 sources by 15 percent.
Senate Bill 1368 (SB 1368): GHG Emissions Standard for Baseload Generation prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.	State, CEC, and LADWP	**Consistent.** SCE meets the requirements of SB 1368. As SCE would provide electricity service to the Project Site, the proposed Project would use electricity that meets the requirements under SB 1368.
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.	State and CEC	**Consistent.** The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The proposed Project would result in new land use development that would be outfitted with appliances and lighting that comply with CEC's standards. In addition, Project Design Feature D-1 would require the use of Energy Star appliances and reduce electricity associated with lighting. Project Design Feature D-2 would require a reduction in electricity and natural gas usage with Title 24 sources by 15 percent.
CCR, Title 24, Building Standards Code: The 2016 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	State and CEC	**Consistent.** Consistent with regulatory requirements, the proposed Project shall comply with applicable provisions of the City's Green Building Ordinance that in turn requires compliance with mandatory standards included in the California Green Building Standards. The 2016 Title 24 standards are 5 percent more efficient (for electricity) for non-residential construction.[c] The 2016 Title 24 standards offer builders

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
possible incorporation of new energy efficiency technologies and methods. 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.		better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. The proposed Project would further support this regulation since Project Design Feature D-2 would commit the proposed Project to exceed the requirements of the 2016 Title 24 standards by reducing energy usage by an additional 15 percent. Thus, the proposed Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the *Climate Action Scoping Plan* to reduce GHG emissions.
Energy Independence and Security Act of 2007 (EISA): EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.	Federal/Manufacturers	**Consistent.** EISA would serve to reduce the use of incandescent light bulbs for the proposed Project and, thus, reduce energy usage associated with lighting. In addition, Project Design Feature D-1 would reduce electricity associated with lighting by 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. Electricity GHG emissions provided in Table IV.D-6 on page IV.D-45 accounts for a 15-percent reduction in lighting electricity consumption with implementation of Project Design Feature D-1 and consistent with this regulation.
Assembly Bill 1109 (AB 1109): The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing or selling general purpose lights that contain certain levels of hazardous substances in the state and 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.[d]	State/ Manufacturers	**Consistent.** As with the EISA, discussed above, the proposed Project would meet the requirements under AB 1109 because it incorporates energy efficient lighting and electricity consumption through Project Design Feature D-1.

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Cap-and-Trade Program: The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.	State	**Consistent.** As required by AB 32 and the Climate Change Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. That being said, the development facilitated by the proposed Project would benefit from this regulatory program in that the GHG emissions associated with the proposed Project's electricity usage 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.
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.	State	**Consistent.** Project Design Feature D-1 would require the proposed Project to achieve 90 points in the City's Green Points System and would achieve LEED Gold equivalency standard (e.g., the building could include photovoltaic panels on portions of the roof deck).
Mobile (51 percent of project inventory)		
Assembly Bill 1493 (AB 1493) "Pavley Standards": AB 1493 requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. In compliance with AB 1493, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles and light duty trucks of model year 2009 through 2016. Model years 2017 through 2025 are addressed by California's Advanced Clean Cars program (discussed below).	State, CARB	**Consistent.** The Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and are expected to reduce GHG emissions by about 30 percent in 2016, all while improving fuel efficiency. This regulatory program applies to vehicle manufacturers, and not directly to land use development. Vehicular travel by the proposed Project would benefit from this regulation in the form of reduced GHG emissions because vehicle trips associated with the proposed Project would be affected by AB 1493. Mobile source emissions generated by the proposed Project would be reduced with implementation of AB 1493 consistent with reduction of GHG emissions under AB 32. Mobile source GHG emissions provided in Table IV.D-6 on page IV.D-45 were calculated using CalEEMod which

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		includes implementation of AB 1493 into mobile source emission factors.
Executive Order S-01-07: The Low Carbon Fuel Standard (LCFS) requires a 10-percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the LCFS as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009).[e,f]	State, CARB	**Consistent.** This regulatory program applies to fuel suppliers, and not directly to land use development. GHG emissions related to vehicular travel by the proposed Project would benefit from this regulation because fuel used by Project-related vehicles would be compliant with LCFS. Mobile source GHG emissions provided in Table IV.D-6 on page IV.D-45 were calculated using CalEEMod which includes implementation of the LCFS into mobile source emission factors.
Advanced Clean Cars Program: In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.	State, CARB	**Consistent.** Similar to AB 1493, this regulatory program applies to manufacturers, and not directly to land use development. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the proposed Project. GHG emissions related to vehicular travel by the proposed Project would benefit from this regulation and mobile source emissions generated by the proposed Project would be reduced with implementation of standards under the Advanced Clean Cars Program consistent with reduction of GHG emissions under AB 32. Mobile source GHG emissions provided in Table IV.D-6 on page IV.D-45, conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation.
Senate Bill (SB) 375: SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.	State, CARB Regional, SCAG	**Consistent.** SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The proposed Project represents an infill development within an existing urbanized area that would ***concentrate new land use development*** within a HQTA. Therefore, the proposed Project would be consistent with SCAG's 2016–2040 RTP/SCS as it is located within a HQTA. Furthermore, the 2016–2040 RTP/SCS would result in an estimated 18-percent decrease in per capita GHG emissions by 2035 and 21-percent decrease in per capita GHG emissions by 2040. Project-

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		related transportation emissions are reduced by approximately 22 percent, in comparison to a project without the design features and characteristics of the proposed Project (see Appendix B of this Draft EIR) and, therefore, the proposed Project would be consistent with SB 375 and the 2016–2040 RTP/SCS.
Solid Waste (8 percent of project inventory)		
California Integrated Waste Management Act of 1989 and Assembly Bill 341: The California Integrated Waste Management Act of 1989 requires each jurisdiction's source reduction and recycling element to include an 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, through source reduction, recycling, and composting facilities.[g] ***AB 341 (2011)*** amended the California Integrated Waste Management Act of 1989 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.[h]	State	**Consistent.** GHG emissions related to solid waste generation from the proposed Project would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would then in return decrease the amount of methane released from the decomposing solid waste. The proposed Project would implement Project Design Feature K.3-3, in Section IV.K.3, Utilities and Service Systems—Solid Waste, of this Draft EIR, which would require the proposed Project to have a solid waste diversion rate of at least 50 percent to comply with AB 939. In addition, with compliance with Project Design Feature K.3-4, in Section IV.K.3, Utilities and Service Systems—Solid Waste, of this Draft EIR, the proposed Project would provide for on-site recycling containers to promote the recycling of paper, metal, glass, and other recyclable materials, to comply with AB 341. Further, to comply with AB 1846, the proposed Project shall arrange for organic waste recycling services.
Water (2 percent of project inventory)		
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	**Consistent.** The proposed Project shall comply with the California Green Building Standards (which include the requirement for a 20-percent overall water use reduction). Project-related GHG emissions from water related sources, provided in Table IV.D-6 on page IV.D-45 incorporates Project Design Feature IV.K-1 in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of the Draft EIR, provides a specific list of water conservation measures. Examples

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		include high-efficiency clothes washers; no-flush or waterless urinals in all non-residential restrooms; installation of tankless and on-demand water heaters in commercial kitchens and restrooms; and use of proper hydro-zoning, turf minimization, zone irrigation, and use of native/drought-tolerant plant materials, among others. The proposed Project would have an overall water use reduction of 20 percent from baseline requirements and would meet the requirements of the California Green Building Standards.
Senate Bill X7-7: The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.	State	**Consistent.** As discussed above under Title 24, the proposed Project would meet this performance based standard. In addition, Project Design Feature IV.K.1-1, of the Draft EIR, provides a specific list of water conservation measures. Examples include high-efficiency clothes washers; no-flush or waterless urinals in all non-residential restrooms; installation of tankless and on-demand water heaters in commercial kitchens and restrooms; and use of proper hydro-zoning, turf minimization, zone irrigation, and use of native/drought-tolerant plant materials, among others. The proposed Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Construction (2 percent of project inventory)		
CARB In-Use Off-Road Regulation: CARB's in-use off-road diesel vehicle regulation ("Off-Road Diesel Fleet Regulation") requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.	CARB	**Consistent.** The Applicant would use construction contractors that would comply with this regulation.

Table IV.D-7 (Continued)
Consistency Analysis—Climate Change Scoping Plan

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
CARB In-Use On-Road Regulation: CARB's in-use on-road heavy-duty vehicle regulation ("Truck and Bus Regulation") applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.[i]	CARB	**Consistent.** The Applicant would use construction contractors that would comply with this regulation.

[a] *California Energy Commission, Utility Annual Power Content Labels for 2015, http://www.energy.ca.gov/pcl/labels/.*

[b] *Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, Ch. 547.*

[c] *CEC, Adoption Hearing, 2016 Building Energy Efficiency Standards.*

[d] *2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534.*

[e] *CARB, Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources, October 23, 2009.*

[f] *Carbon intensity is a measure of the GHG emissions associated with the various production, distribution, and use steps in the "lifecycle" of a transportation fuel.*

[g] *Cal. Pub. Res. Code § 41780(a).*

[h] *Cal. Pub. Res. Code § 41780.01(a).*

[i] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, page last reviewed November 15, 2016.*

Source: Eyestone Environmental, 2017.

As discussed above, the SCAG region in 2012 included approximately 18.3 million people, 5.9 million homes, and 7.4 million jobs. By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. The 2016–2040 RTP/SCS is the region's approved transportation and sustainability investment strategy for protecting and enhancing the region's quality of life and economic prosperity through this period. The 2016–2040 RTP/SCS implementation is expected to result in regional benefits to mobility, economy, health and sustainability. The 2016–2040 RTP/SCS is also expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita transportation emissions of 9 percent by 2020 and 16 percent by 2035.[91] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.92 The 2016–2040 RTP/SCS would result in an estimated 8-percent decrease in per capita GHG emissions by 2020, 18-percent decrease in per capita GHG emissions by 2035, and 21-percent decrease in per capita GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016–2040 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016–2040 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the proposed Project, strategies and policies set forth in the 2016–2040 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency.

(i) Consistency with Integrated Growth Forecast

The 2016–2040 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted

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[91] *CARB, Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375, Resolution 10-31.*

[92] *SCAG, Final 2016–2040, RTP/SCS, April 2016, p. 153.*

by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. As discussed in Section VII, Effects Found Not to Be Significant, of this Draft EIR, the proposed Project would not directly contribute to population growth in the Project area as the proposed Project does not include new housing. In addition, as some of the employment opportunities generated by the proposed Project would be filled by people already residing in the vicinity of the Project Site, the potential growth associated with Project employees who may relocate their place of residence would not be substantial. As such, the proposed Project would not result in a notable increase in demand for new housing, and any new demand, should it occur, would be minor in the context of forecasted growth for the City of West Hollywood. Such levels of population and employment growth are consistent with the population and employment forecasts for the Subregion as adopted by SCAG in the 2016–2040 RTPS/SCS.

In terms of the location of future development, Exhibits 3 (Population Change, 2012–2040), 6 (Household Change, 2012–2040), and 9 (Employment Change, 2012–2040) within the Demographics and Growth Forecasts Appendix of the 2016–2040 RTP/SCS, show the areas within the SCAG region where growth is planned to occur.[93] A review of the exhibits indicates that the Project Site is an area designated for future population, household, and employment growth. Thus, development of the Project Site has been incorporated into the 2016–2040 RTP/SCS. Please refer to Section IV.G, Land Use, of this Draft EIR, for additional information regarding consistency with the 2016–2040 RTP/SCS integrated growth assumptions.

(ii) Consistency with VMT Reduction Strategies and Policies

As discussed above, proposed Project GHG emissions at buildout (Year 2020) would result in a 19-percent reduction in mobile source emissions, in comparison to a project without the design features and characteristics of the proposed Project and would be consistent with SCAG's adopted 2016–2040 RTP/SCS estimated 8-percent decrease in per capita GHG emissions by 2020.[94] This reduction is attributable to the proposed Project's characteristics of being an infill project near transit that supports multi-modal transportation options.

The proposed Project would also be consistent with the following key GHG reduction strategies in SCAG's 2016–2040 RTP/SCS, which are based on changing the region's land use and travel patterns:

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[93] *SCAG, Final 2016–2040 RTP/SCS.*

[94] *For reduction calculations, see Appendix B of this Draft EIR.*

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

The proposed Project represents an infill development within an existing urbanized area that would concentrate new development within a HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.J, Traffic, Access, and Parking, of this EIR for further details). The Project Site is located approximately 0.05 mile from the Metro and CityLine bus stops at the intersection of Sunset Boulevard and San Vicente Boulevard. In addition, the proposed Project would provide employees and guests with convenient access to public transit and opportunities for walking and biking (through the provision of bicycle storage areas on-site), which would facilitate a reduction in VMT and related vehicular GHG emissions. Furthermore, access to the regional rail network (Metro subway and light rail and Metrolink) is available via public transit. These and other measures would further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of SCAG's 2016–2040 RTP/SCS.

(iii) Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016–2040 RTP/SCS, with regard to individual development projects, such as the proposed Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2016–2040 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The proposed Project, in response to this policy initiative and consistent with the City of West Hollywood Green Building Ordinance would provide preferential parking for alternative fuel vehicles (with a minimum of 2 percent of total spaces).

(iv) Energy Efficiency Strategies and Policies

The third important focus within the 2016–2040 RTP/SCS for individual developments, such as the proposed Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016–2040 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed above, the following project design features would reduce the amount of energy used by the proposed Project. Specifically, Project Design Feature D-1 would require the

proposed Project to achieve 90 points in the City's Green Points System and would achieve LEED Gold equivalency standard (e.g., use of Energy Star appliances and reduce electricity associated with lighting by 15 percent in comparison to code requirements). Project Design Feature D-2 would require a reduction in electricity and natural gas usage with Title 24 sources by 15 percent. In total, Project GHG emissions from electricity and natural gas usage would be reduced by 22 percent with implementation of Project Design Features D-1 and D-2.[95]

(v) Land Use Assumptions

At the regional level, the 2016–2040 RTP/SCS is an applicable plan adopted for the purpose of reducing GHGs. In order to assess the proposed Project's potential to conflict with the 2016–2040 RTP/SCS, this Draft EIR also analyzes the proposed Project's land use assumptions for consistency with those utilized by SCAG in its Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's Regional Transportation Plan/Sustainable Communities Strategy, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The proposed Project's consistency with the applicable goals and principles set forth in the 2016–2040 RTP/SCS is analyzed in Table IV.G-3 in Section IV.G, Land Use, of this Draft EIR. As shown in Table IV.G-3, the proposed Project is consistent with the Actions and Strategies set forth in the 2016–2040 RTP/SCS.[96]

In sum, the proposed Project is the type of land use development that is encouraged by the 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.[97] By furthering implementation of SB 375, the proposed Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Therefore, the proposed Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016–2040 RTP/SCS.

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[95] *For reduction calculations, see Appendix B of this Draft EIR.*

[96] *As discussed in the 2016–2040 RTP/SCS, the actions and strategies included in the 2016–2040 RTP/SCS remain unchanged from those adopted in the 2012–2035 RTP/SCS.*

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

(c) Climate Action Plan

The proposed Project would be consistent with the City of West Hollywood CAP.[98] The CAP outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities. Table IV.D-8 on page IV.D-64, provides a discussion of the proposed Project's consistency with applicable GHG-reducing actions from the CAP. As discussed below, the proposed Project is consistent with the applicable goals and actions of the CAP. In addition, as shown above, the proposed Project would achieve a 21-percent reduction in GHG emissions in comparison to a project without the design features and characteristics of the proposed Project, which is more than the approximately 16.9-percent reduction in BAU needed to achieve compliance with the CAP.

(d) Conclusion

In summary, the regulatory compliance analysis provided above demonstrates that the proposed Project complies with or exceeds the regulations and GHG reduction actions/strategies outlined in the Regional Transportation Plan/Sustainable Communities Strategy, the *Climate Change Scoping* Plan, and the City of West Hollywood CAP. Consistent with CEQA Guidelines Sections 15064(h)(3) and 15064.4, the proposed Project's consistency with the Regional Transportation Plan/Sustainable Communities Strategy, the *Climate Change Scoping Plan*, and the City of West Hollywood CAP demonstrates that the proposed Project's GHG emissions would be less than significant.

(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.[99] Even though these studies did not provide an exact

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[98] *City of West Hollywood, Climate Action Plan, 2011.*

[99] *Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

Table IV.D-8
Consistency with Applicable Climate Action Strategies and Emission Reduction Measures of the CAP

Measure		Consistency Analysis
Community Engagement and Leadership		
CL-1.2	Reduce energy use in City facilities and operations.	**Consistent.** While this action primarily applies to the City, the proposed Project shall comply with applicable provisions in the City of West Hollywood Green Building Ordinance and compliance with mandatory standards included in the California Green Building Standards. The standards offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. Furthermore, Section IV.K.4, Utilities and Service Systems—Energy, of this Draft EIR demonstrates that the proposed Project efficiently uses energy and does not result in wasteful energy use.
CL-1.3	Reduce water use in City facilities and operations.	**Consistent.** While this action primarily applies to the City, the proposed Project would incorporate water conservation features to reduce indoor water use by at least 20 percent in comparison to baseline requirements; plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) that comply with the performance requirements specified in the City of West Hollywood Green Building Ordinance; weather-based irrigation system; and water-efficient landscaping. Further detail is provided in Section IV.K.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.
Land Use and Community Design		
LU-1.1	Facilitate the establishment of mixed-use, pedestrian- and transit-oriented development along the commercial corridors and in Transit Overlay Zones.	**Consistent.** Although the Project Site is not located within a Transit Overlay Zone, the Project Site is a commercial, pedestrian-friendly development located along Sunset Boulevard, a commercial corridor. Furthermore, the proposed Project represents an infill development within an existing urbanized area that would concentrate new development within a HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.J, Traffic, Access, and Parking, of this EIR for further details). This measure would promote a reduction in VMT and subsequent reduction in GHG emissions.
Transportation and Mobility		
T-1.1	Increase the pedestrian mode share in West Hollywood with convenient and attractive pedestrian infrastructure and facilities.	**Consistent.** The proposed Project would include retail space, an art gallery, creative offices, as well as guestrooms, restaurants, lounges, and bars to support the Arts Club, which would encourage pedestrian movement along Sunset Boulevard. Furthermore, the Project Site is located within walking distance of retail facilities, restaurants, and public transportation. Furthermore, as discussed above, the proposed Project represents an infill development within an existing urbanized area that would concentrate new development within a HQTA, which is defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.J, Traffic, Access, and Parking, of this EIR for further details).
T-2.2	Install bike racks and bike parking in the City where bike parking infrastructure	**Consistent.** As discussed above and in more detail in Section IV.J, Traffic, Access, and Parking, of this Draft EIR, the proposed Project would provide bicycle parking spaces for visitors and employees on-site in

Table IV.D-8 (Continued)
Consistency with Applicable Climate Action Strategies and Emission Reduction Measures of the CAP

Measure		Consistency Analysis
	currently does not exist.	compliance with the requirements of the WHMC.
Energy Use and Efficiency		
E-2.2	Require all new construction to achieve California Building Code Tier II Energy Efficiency Standards (Section 503.1.2).	**Consistent.** The proposed Project shall comply with applicable provisions in the City of West Hollywood Green Building Ordinance and compliance with mandatory standards included in the California Green Building Standards. In addition, the proposed Project would further support this regulation since Project Design Feature D-2 would commit the proposed Project to exceed the requirements of the 2016 Title 24 standards by reducing energy usage by an additional 15 percent.
E-3.2	Require the use of recycled materials for 20 percent of construction materials in all new construction.	**Consistent.** The proposed Project shall comply with applicable provisions in the City of West Hollywood Green Building Ordinance, which include provides for all new development projects in West Hollywood to use a minimum of 20 percent recycled materials as part of the proposed construction.
E-3.4	Facilitate the installation of solar photovoltaic systems on multi-family residential, commercial, and industrial buildings, and parking lots.	**Consistent.** The proposed Project would comply with Title 24 which requires that roofs be solar ready.
Water Use and Efficiency		
W-1.1	Reduce per capita water consumptions by 30 percent by 2035.	**Consistent.** The proposed Project shall comply with the California Green Building Standards (which include the requirement to achieve a 20-percent overall water use reduction). Project-related GHG emissions from water related sources, provided in Table IV.D-6 on page IV.D-45 incorporates Project Design Feature IV.K.1-1, of the Draft EIR, provides a specific list of water conservation measures. Examples include high-efficiency clothes washers; no-flush or waterless urinals in all non-residential restrooms; installation of tankless and on-demand water heaters in commercial kitchens and restrooms; and use of proper hydro-zoning, turf minimization, zone irrigation, and use of native/drought-tolerant plant materials, among others.

Source: Eyestone Environmental, 2016

regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050.

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

The proposed Project's consistency with SCAG's RTP/SCS demonstrates that the proposed Project will be consistent with post-2020 GHG reduction goals. The 2016–2040 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals by meeting and exceeding the SB 375 targets for 2035, as well as achieving an approximately 21-percent decrease in per capita GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]). By furthering implementation of SB 375, the proposed Project supports regional land use and transportation GHG reductions consistent with state climate targets beyond 2020.

4. Cumulative Impacts

As explained above, the analysis of the significance of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem and a single project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. Accordingly, the project-level analysis above took into account the potential for the proposed Project to contribute to the cumulative impact of global climate change. Table IV.D-6 on page IV.D-45 illustrates that implementation of the proposed Project's design features and its compliance with regulatory requirements, including state mandates, would contribute to GHG reductions. These reductions support state goals for GHG emissions reduction.

While there are currently no applicable CARB, SCAQMD, or City of West Hollywood significance thresholds, specific reduction targets, and no approved policy or guidance to assist in determining significance at the project or cumulative level and no generally accepted methodology to determine whether GHG emissions associated with a specific project represents new emissions or existing, displaced emissions, the analysis above shows that the proposed Project is consistent with the RTP/SCS' regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. The proposed Project is also consistent with CARB's *Climate Change Scoping*

Plan, 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. In addition, as described above, the proposed Project would implement a range of sustainability features and would comply with both the City of West Hollywood CAP and the City of West Hollywood Green Building Ordinance, which emphasize, among other things changing transportation and land use patterns to reduce auto dependence, improving energy conservation and energy efficiency, increasing renewable energy generation, and reducing water use. The proposed Project's design features and characteristics would advance these objectives. Further, the related projects would also be anticipated to comply with many of these same emissions reduction goals and objectives (e.g., City of West Hollywood CAP and Green Building Ordinance). For these reasons, cumulative impacts resulting from the proposed Project and related projects with respect to global climate change would be less than significant and no mitigation measures would be required.

5. Mitigation Measures

With implementation of regulatory requirements and project design features, including those provided above, impacts related to GHG emissions would be less than significant.

6. Level of Significance After Mitigation

Project impacts related to GHG emissions would be less than significant without mitigation.