

IV. Environmental Impact Analysis

C. Greenhouse Gas Emissions

1. Introduction

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

2. Environmental Setting

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

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

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

¹ USEPA, 1/19/17 Snapshot, *Climate Change: Basic Information*, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed December 28, 2018.

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

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

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 CO₂ emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO₂ emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state’s population and economic activities, is also a major contributor to the global warming problem.”⁶

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 December 28, 2018.*

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

⁶ *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

a. GHG Background

GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).⁷ Carbon dioxide is the most abundant GHG. Other GHGs are less abundant, but have higher global warming potential than CO₂. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO₂, denoted as CO₂e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the GHGs is provided in Table IV.C-1 on page IV.C-4.

Global Warming Potentials (GWPs) are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO₂. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. A summary of the atmospheric lifetime⁸ and GWP of selected gases is presented in Table IV.C-2 on page IV.C-5. As indicated below, GWPs range from 1 to 22,800.

b. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and be responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency produced climate change assessments which detail impacts of global warming in California.⁹ These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion;

⁷ As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.

⁸ 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.*

⁹ State of California, Department of Justice, Office of the Attorney General, *Climate Change Impacts in California*, <https://oag.ca.gov/environment/impact>, accessed January 3, 2019.

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

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

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

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

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

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50–200	1
Methane (CH ₄)	12 (+/-3)	25
Nitrous Oxide (N ₂ O)	0.114	298
HFC-23: Fluoroform (CHF ₃)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH ₂ FCF ₃)	14	1,430
HFC-152a: 1,1-Difluoroethane (C ₂ H ₄ F ₂)	1.4	124
PFC-14: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC-116: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800
Nitrogen Trifluoride (NF ₃)	740	17,200
<p><i>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.</i></p>		

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

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO₂; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (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.¹⁰

c. Regulatory Framework

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

(1) Federal

(a) Federal Clean Air Act

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

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs “are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes.” The USEPA further found that “atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act.” The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.¹¹ While these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to

¹⁰ 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.

¹¹ USEPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule*.

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 CO₂ 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 CO₂ Emissions from Stationary Sources,” which analyzes accounting methodologies and suggests implementation for biogenic CO₂ 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 CO₂ per MW-hour (CO₂/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.¹²

(b) Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency

¹² 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 December 28, 2018.

and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On April 2, 2018, the USEPA signed the Mid-term Evaluation Final Determination which finds that the model year 2022-2025 greenhouse gas standards are not appropriate and should be revised.¹³ This serves to initiate a notice to further consider appropriate standards for model year 2022-2025 light duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California’s waiver under the Clean Air Act to establish more stringent standards.¹⁴

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.¹⁵

Building on the success of the first phase of standards, in August 2016, the EPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about \$170 billion.¹⁶ However, as discussed above, the USEPA and NHTSA have proposed to rollback GHG and fuel economy standards for cars

¹³ *Federal Register, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles*, www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty, accessed December 28, 2018.

¹⁴ *Regulations, The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks*, www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0756, accessed January 3, 2019.

¹⁵ *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project’s emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

¹⁶ *U.S. EPA, EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond, August 2016.*

and light-duty trucks, which suggests a similar rollback of Phase 2 standards for medium and heavy-duty vehicles may be pursued.

(c) Energy Independence and Security Act

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

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”¹⁷

(2) State

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

Executive Order S-3-05, issued in June 2005 by Governor Arnold Schwarzenegger (Governor Schwarzenegger), 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

¹⁷ A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

progress toward meeting the Governor's GHG emission reduction targets. The Statewide GHG targets are as follows:

- By 2010, reduce to 2000 emission levels;¹⁸
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

Executive Order B-30-15, issued by Governor Edmund G. "Jerry" Brown (Governor Brown) in April 2015, established an additional statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030 and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05) aligns with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius.¹⁹

The State Legislature adopted equivalent 2020 and 2030 statewide targets in the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32), and Senate Bill (SB) 32, respectively, both of which are discussed below. However, the Legislature has not yet adopted a target for the 2050 horizon year. As a result of Executive Order S-3-05, the California Climate Action Team (CAT), led by the Secretary of CalEPA, was formed. The CAT is made up of representatives from a number of state agencies and was formed to implement global warming emission reduction programs and to report on the progress made toward meeting statewide targets established under the Executive Order. The CAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.²⁰

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

¹⁸ *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.*

¹⁹ *CARB, Frequently Asked Questions about Executive Order B-30-15, 2030 Carbon Target and Adaptation FAQs, April 29, 2015.*

²⁰ *CalEPA, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.²¹

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

(b) Assembly Bill 32 and Senate Bill 32

AB 32, the California Global Warming Solutions Act of 2006, commits the state to achieving the following:

- By 2010, reduce to 2000 GHG emission levels;²² and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California CAT GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.²³

SB 32, signed September 8, 2016, updates AB 32 to include an emissions reductions goal for the year 2030. Specifically, SB 32 requires CARB to ensure that

²¹ CalEPA, *Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006*, p. 58.

²² *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.*

²³ *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.*

statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

California has achieved the AB 32 2020 Emissions Target goal of reducing statewide GHG emissions to 1990 levels. In 1990, statewide emissions were 431 million metric tons. In the State's 2016 inventory, which was the latest inventory calculated (released July 11, 2018), annual GHG emissions were calculated at 429 million metric tons.²⁴

(c) Climate Change Scoping Plan

In 2008, CARB approved the *Climate Change Scoping Plan* (referred to herein as the 2008 Climate Change Scoping Plan), as required by AB 32.²⁵ Subsequently, CARB approved updates to the 2008 Climate Change Scoping Plan in 2014 (First Update) and 2017 (2017 Update), with the 2017 Update considering SB 32 (adopted in 2016) in addition to AB 32.

The 2008 Climate Change Scoping Plan proposed a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.”²⁶ The 2008 Climate Change Scoping Plan identified a range of GHG reduction actions which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

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

²⁴ CARB, “Climate Pollutants Fall Below 1990 Levels for First Time,” July 11, 2018, ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time, accessed September 25, 2018.

²⁵ CARB, *Climate Change Scoping Plan: A Framework for Change*, December 2008.

²⁶ CARB, *Climate Change Scoping Plan*, December 2008.

sources through implementation of the Renewables Portfolio Standard.²⁷ Additionally, the 2008 Climate Change Scoping Plan emphasizes opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas would be accomplished through “improving energy efficiency by 25 percent.”

The 2008 Climate Change Scoping Plan identifies a number of specific issues relevant to the Project, including:

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

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

- The importance of supporting the Department of Water Resources’ work to implement the Governor’s objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The 2008 Climate Change Scoping Plan noted that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.
- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California has to make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the “business-as-usual” or BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 Climate Change Scoping Plan. For example, in further explaining CARB’s BAU methodology, CARB assumed that all new electricity

²⁷ For a discussion of Renewables Portfolio Standard, refer to subsection 2(f), California Renewables Portfolio Standard.

generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the 2008 Climate Change Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations).²⁸

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

As part of the Supplemental FED, CARB updated the projected 2020 BAU emissions inventory based on then-current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the State's average emissions from 2006 through 2008. Specific emission reduction measures included were the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS.²⁹ In addition, CARB also factored into the 2020 BAU inventory emissions reductions associated with a 33-percent Renewable Energy Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would

²⁸ CARB, *Climate Change Scoping Plan*, December 2008, p. 12.

²⁹ *Pavley I* are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. *Pavley I* could potentially result in 27.7 million metric tonnes CO₂e reduction in 2020. *Pavley II* will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO₂e.

require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.^{30,31}

In 2014, CARB adopted the First Update.³² The stated purpose of the First Update was to “highlight... California’s success to date in reducing its GHG emissions and lay... the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.”³³ The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of current policy goals.³⁴

In conjunction with the First Update, CARB identified “six key focus areas comprising major components of the State’s economy to evaluate and describe the larger transformative actions that will be needed to meet the State’s more expansive emission reduction needs by 2050.”³⁵ Those six areas were: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identified key recommended actions for each sector that would facilitate achievement of the 2050 reduction target.

Based on CARB’s research efforts, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050.”³⁶ 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.

³⁰ CARB, *Supplement to the AB 32 Scoping Plan FED, Table 1.2-2*.

³¹ *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are 596 million metric tons CO₂e under 2020 BAU and a required reduction of 169 million metric tons CO₂e (28.4 percent).*

³² *Health & Safety Code §38561(h) requires CARB to update the Scoping Plan every five years.*

³³ *CARB, 2014 Update, May 2014, p. 4.*

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

³⁵ *CARB, First Update to the Climate Change Scoping Plan, May 2014, p. 6.*

³⁶ *CARB, 2014 Update, May 2014, p. 32.*

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

In December 2017, CARB adopted the 2017 Update. The 2017 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constraints and reduces emissions at covered sources.³⁷

(d) Assembly Bill 197

AB 197, signed September 8, 2016, is a bill linked to SB 32 and signed on September 8, 2016, prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website the emissions of 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 Legislature to the CARB board as ex officio, non-voting members and also creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the state's programs, policies, and investments related to climate change.

(e) Cap-and-Trade Program

The 2008 Climate Change Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020. CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 and the State Legislature extended the Program through 2030 with the adoption of AB 398.

³⁷ CARB, *2017 Scoping Plan Update*, November 2017, p. 6.

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

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

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

The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.³⁸

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

³⁸ CARB, 2014 Update, May 2014, p. 86.

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

The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the “capped sectors.” Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.³⁹ [...]

[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.⁴⁰

Overall, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state’s emissions forecasts and the effectiveness of direct regulatory measures. The Cap-and-Trade Program covers approximately 85 percent of California’s GHG emissions.⁴¹

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects’ electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program’s first compliance period.⁴² Furthermore, the Cap-and-Trade Program also covers

³⁹ CARB, 2014 Update, May 2014, p. 88.

⁴⁰ CARB, 2014 Update, May 2014, pp. 86–87.

⁴¹ Center for Climate and Energy Solutions, California Cap and Trade, www.c2es.org/us-states-regions/key-legislation/california-cap-trade, accessed March 11, 2019.

⁴² 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

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.

As discussed above, the current Cap-and-Trade Program would end on December 31, 2020. AB 398 was enacted in 2017 to extend and clarify the role of the State’s Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

(f) Energy-Related Sources

(i) Senate Bill 1078 (California Renewables Portfolio Standard)

SB 1078, which is also known as the California Renewables Portfolio Standard (RPS) program, required that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20 percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, Governor 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. 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. These levels of reduction are consistent with the Los Angeles Department of Water and Power’s (LADWP) commitment to achieve 35 percent renewables by 2020.

In 2018, LADWP indicated that 30 percent of its electricity came from renewable resources in Year 2017.⁴³ Therefore, under SB 2X, LADWP is required to increase its electricity from renewable resources by an additional 3 percent to comply with the RPS of 33 percent by 2020.

(ii) Senate Bill 350

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of electricity from

⁴³ *California Energy Commission, Utility Annual Power Content Labels for 2017, www.energy.ca.gov/pcl/labels/, accessed December 27, 2018.*

renewable sources from 33 percent to 50 percent by 2030; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.⁴⁴

(iii) Senate Bill 100

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California's RPS and SB 350, as discussed above, to the following: achieve 50 percent renewable resources target by December 31, 2026 and achieve a 60 percent target by December 31, 2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.⁴⁵

(iv) Senate Bill 1368

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

(g) Mobile Sources

(i) Assembly Bill 1493 (Pavley I)

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

⁴⁴ *Senate Bill 350 (2015–2016 Reg. Session) Stats 2015, ch. 547.*

⁴⁵ *Senate Bill 100 (2017-2018 Reg. Session) Stats 2018, ch. 312.*

September 24, 2009, CARB adopted amendments to these “Pavley” regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.⁴⁶ 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, 2009.⁴⁷ 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.⁴⁸ 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 are directed to CARB. CARB released a draft version of the LCFS in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day.

The development of the 2017 Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In calculating statewide emissions and targets, the 2017 Update has assumed that the LCFS be extended to an 18-percent reduction in carbon intensity beyond 2020. In September 2018, CARB approved a carbon intensity reduction of 20 percent by 2030, in order to meet the 2030 emissions target.⁴⁹

⁴⁶ CARB, *Clean Car Standards—Pavley, Assembly Bill 1493*, www.arb.ca.gov/cc/ccms/ccms.htm, last reviewed January 11, 2017.

⁴⁷ As previously noted, on August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California’s waiver under the Clean Air Act to establish more stringent standards

⁴⁸ 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.

⁴⁹ CARB, “*CARB amends Low Carbon Fuel Standard for wider impact*,” September 27, 2018, ww2.arb.ca.gov/news/carb-amends-low-carbon-fuel-standard-wider-impact, accessed March 11, 2019.

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015–2025.⁵⁰ The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.⁵¹ 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 2025.⁵²

(iv) Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, SB 375 was signed by Governor Schwarzenegger on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under SB 375, each Metropolitan Planning Organization (MPO) is required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduce passenger VMT and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the MPO is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

(v) Senate Bill 743

Governor Brown signed SB 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote

⁵⁰ CARB, *California’s Advanced Clean Cars Program*, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB September 1, 2017.

⁵¹ CARB, *California’s Advanced Clean Cars Program*, www.arb.ca.gov/msprog/acc/acc.htm, last reviewed by CARB September 1, 2017.

⁵² CARB, *News Release: CARB finds vehicle standards are achievable and cost-effective*, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed December 28, 2018.

the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.”⁵³ Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”⁵⁴

(h) Building Standards

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

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

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

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.⁵⁵ The CEC adopted the 2016 Title 24 standards, which became effective on January 1, 2017, and are applicable to the Project.⁵⁶ The 2016 standards continue to improve upon the previous 2013 Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.⁵⁷ Compliance with California’s Energy Efficiency Standards is enforced through the building permit process.

(iii) California Green Building Standards (CALGreen Code)

The most recent update to the California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on

⁵³ *Public Resources Code Section 21099(b)(1).*

⁵⁴ *Public Resources Code Section 21099(b)(1).*

⁵⁵ *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed December 28, 2018.*

⁵⁶ *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed December 28, 2018.*

⁵⁷ *CEC, 2016 Building Energy Efficiency Standards, www.energy.ca.gov/title24/2016standards/, accessed December 28, 2018.*

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, including quantity, location, size, single EV space, multiple EV spaces, and identification.⁵⁸ 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.⁵⁹ Compliance with the CALGreen is enforced through the building permit process.

(i) Senate Bill 97

On June 19, 2008, OPR released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation; 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.⁶⁰ 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:

⁵⁸ *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.*

⁵⁹ *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.*

⁶⁰ *See 14 CCR § 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) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.⁶¹

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.”⁶²

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

(j) Center for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court’s decision published on November 30, 2015, in *Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204* (also known as the “Newhall Ranch Case”) reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the City of Santa Clara. The EIR used a BAU approach to determine whether the project would impede the state’s compliance with statutory emissions reduction mandate established by the 2008 Climate Change Scoping Plan. The Court did not invalidate the BAU approach entirely but did hold that “the Scoping Plan nowhere related that *statewide* level of reduction effort to the percentage of reduction that would or should be required from

⁶¹ 14 CCR § 15064.4(b).

⁶² 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.

individual projects and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.”⁶³

The California Supreme Court suggested regulatory consistency as a pathway to compliance, by stating that a lead agency might assess consistency with AB 32’s goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities, including statewide programs and local climate action plans or GHG emissions reduction plans. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. Importantly, the Court also suggested: “A lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions” (bright line threshold approach) if supported by substantial evidence.

(3) Regional

(a) *South Coast Air Quality Management District*

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

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

⁶³ *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 225-226.

- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.⁶⁴ Within its October 2008 document, 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 of 10,000 MTCO_{2e} per year for stationary source/industrial projects where SCAQMD is the lead agency. However, SCAQMD has yet to adopt a GHG significance threshold for land use development projects such as commercial/residential projects; the proposed commercial/residential thresholds were never formally adopted.

(b) Southern California Association of Governments

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016.⁶⁵ The 2016 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 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,⁶⁶
- Develop “Complete Communities”;
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;

⁶⁴ SCAQMD, *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E*.

⁶⁵ SCAG, *Final 2016–2040 RTP/SCS*.

⁶⁶ *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.*

- 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 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 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 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 RTP/SCS indicates the SCAG region was home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs.⁶⁷ 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 Areas⁶⁸ (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 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.

The 2016 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and 18 percent by 2035.⁶⁹ This level of reduction would meet the region's GHG targets set by CARB of 8 percent per capita by 2020 and exceed the region's GHG target set by CARB of 13 percent per capita by 2035.⁷⁰ Furthermore, although there

⁶⁷ *The SCAG 2016–2040 RTP/SCS is based on year 2012 demographic data with growth forecasts developed for 2020, 2035, and 2040.*

⁶⁸ *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.*

⁶⁹ *CARB, Updated SB 375 Regional Greenhouse Gas Emissions Reduction Targets, March 2018.*

⁷⁰ *SCAG, Final 2016, RTP/SCS, Executive Summary, p. 8, April 2016.*

are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016 RTP/SCS's GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.⁷¹ The 2016 RTP/SCS would result in an estimated 21 percent decrease in per capita passenger vehicle 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 passenger vehicle GHG emissions by 2040 (an additional 2-percent reduction in the five years between 2035 [19 percent] and 2040 [21 percent]), the 2016 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.

Subsequent to adoption of the 2016 RTP/SCS, CARB adopted in 2018 a new target requiring a 19-percent decrease in VMT for the SCAG region by 2035. It is expected that this new target will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are therefore expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

(4) Local

(a) *City of Los Angeles Green LA Action Plan/ ClimateLA Plan*

The City of Los Angeles began addressing the issue of global climate change by publishing *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* (LA Green Plan/ClimateLA) in 2007. This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities. According to the LA Green Plan, the City of Los Angeles is committed to the goal of reducing emissions of CO₂ to 35 percent below 1990 levels by year 2030. To achieve this, the City has been implementing the following:

- Increase the generation of renewable energy;
- Improve energy conservation and efficiency; and
- Change transportation and land use patterns to reduce dependence on automobiles.⁷²

To facilitate implementation of the LA Green Plan, the City adopted the Los Angeles Green Building Code, as discussed below. In addition, LADWP will continue to implement

⁷¹ SCAG, *Final Program Environmental Impact Report for 2016–2040, RTP/SCS, April 2016, Figure 3.8.4-1.*

⁷² *City of Los Angeles, Green LA: An Action Plan to Lead the Nation in Fighting Global Warming, May 2007.*

programs to emphasize water conservation and will also pursue securing alternative supplies, including recycled water and storm water capture. Furthermore, the City implemented the Recovering Energy, Natural Resources and Economic Benefit from Waste for Los Angeles (RENEW LA) plan to meet solid waste reduction goals by expanding recycling to multifamily dwellings, commercial establishments, and restaurants. Under the RENEW LA plan, the City is also developing facilities that will convert solid waste to energy without incineration.⁷³ These measures would serve to reduce overall emissions from the City.

In 2008, the City released an implementation program for the LA Green Plan referred to as ClimateLA, which provides detailed information about each action item discussed in the LA Green Plan framework.⁷⁴ Action items range from harnessing wind power for electricity production and energy efficiency retrofits in City buildings, to converting the City's fleet vehicles to cleaner and more efficient models, and reducing water consumption. ClimateLA is a living document, reflecting a process of ongoing learning and continuous improvement as technology advances and City departments develop expertise in the methods of lowering GHG emissions.

(b) City of Los Angeles Green Building Code

On December 15, 2011, the Los Angeles City Council approved Ordinance No. 181,481, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, by adding a new Article 9 to incorporate various provisions of the 2010 CALGreen Code. On December 20, 2016, the Los Angeles City Council approved Ordinance No. 184,692, which further amended LAMC Chapter IX by amending certain provisions of Article 9 to reflect local administrative changes and incorporating by reference portions of the 2016 CALGreen Code. Projects filed on or after January 1, 2017, must comply with the provisions of the Los Angeles Green Building Code.

(c) City of Los Angeles General Plan

The City does not have a General Plan Element specific to global warming/climate change and GHG emissions. However, the following five goals from the Air Quality Element of the General Plan would also serve to reduce GHG emissions:

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;

⁷³ *City of Los Angeles, Recovering Energy Natural Resources and Economic Benefit from Waste for Los Angeles, June 2011.*

⁷⁴ *City of Los Angeles, ClimateLA, 2008.*

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

(d) City of Los Angeles Sustainable City pLAN

The Sustainable City pLAN was adopted in 2015 and includes both short-term and long-term aspirations through the year 2035 in various topic areas, including: water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.⁷⁵ Specific targets included the construction of new housing units within 1,500 feet of transit by 2017, reducing vehicle miles traveled per capita by five percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025. The Sustainable City pLAN will be updated every four years.

(e) Traffic Study Policies and Procedures

In December 2016, the City of Los Angeles Department of Transportation (LADOT) developed the Transportation Impact Study Guidelines (TISG) to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a transportation impact study. The TISG is consistent with the City's goals to emphasize the importance of sustainability, smart growth, and reduction of GHG emissions in addition to traditional traffic flow considerations when evaluating and mitigating impacts to the transportation system as a result of land use policy decisions. The TISG prioritizes transportation demand management strategies and multi-modal strategies over automobile-centric solutions when mitigating project-related impacts to the City's transportation system. Through acknowledgement of an imminent update that will identify VMT reduction thresholds, the TISG stands as an implementing mechanism of the

⁷⁵ *City of Los Angeles, Sustainable City pLAN, April 2015.*

City's strategy to conform to the mandates and requirements of AB 32, SB 375, and SB 743.

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, 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 8.2 percent of national GHG emissions.⁷⁶ California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California consist of CO₂ produced from fossil fuel combustion. The current California GHG inventory, which was prepared by CARB, compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 to 2016.⁷⁷ It includes estimates for CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. The GHG inventory for California for years 2010 through 2016 is presented in Table IV.C-3 on page IV.C-33. As shown in Table IV.C-3, the GHG inventory for California in 2016 was 429.35 million MTCO₂e.

(2) Existing Project Site Emissions

The Project Site is currently developed with six commercial buildings which are occupied by audio/video equipment rental and sales business, offices, a commercial printing shop, and surface parking. 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, mobile source emissions from the existing uses are generated by motor vehicle trips to and from the Project Site. Additionally, waste sources emissions are from solid waste generated at the Project Site and water source emissions are generated

⁷⁶ CEC, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, CEC-600-2006-013, October 2006.

⁷⁷ A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.

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

	2010	2011	2012	2013	2014	2015	2016
Transportation	165.07	161.51	161.22	160.90	162.28	166.14	169.38
<i>On Road</i>	151.20	148.03	147.71	147.07	148.04	151.52	154.64
Passenger Vehicles	114.13	111.37	111.77	111.52	112.20	116.33	119.03
Heavy Duty Trucks	37.07	36.65	35.93	35.55	35.83	35.19	35.62
<i>Ships & Commercial Boats</i>	3.66	3.52	3.43	3.42	3.49	3.42	3.24
<i>Aviation (Intrastate)</i>	3.84	3.73	3.75	3.93	3.90	4.22	4.44
<i>Rail</i>	2.24	2.38	2.38	2.38	2.38	2.38	2.37
<i>Off Road</i>	2.03	2.13	2.23	2.33	2.43	2.53	2.63
<i>Unspecified</i>	2.09	1.72	1.71	1.77	2.04	2.07	2.07
<i>Percent of Total Emissions</i>	37%	36%	36%	36%	37%	38%	39%
Electric Power	90.34	88.06	95.09	89.65	88.24	83.67	68.58
<i>In-State Generation</i>	46.75	41.20	51.03	49.47	51.72	49.93	42.30
Natural Gas	40.59	35.92	45.77	45.66	46.43	45.16	38.28
Other Fuels	5.05	4.03	4.44	2.91	4.40	3.65	2.55
Fugitive and Process Emissions	1.10	1.25	0.82	0.90	0.90	1.13	1.48
<i>Imported Electricity</i>	43.59	46.86	44.07	40.17	36.51	33.74	26.28
<i>Unspecified Imports</i>	13.45	15.52	17.48	11.82	13.44	11.21	9.68
<i>Specified Imports</i>	30.14	31.34	26.59	28.35	23.07	22.52	16.60
<i>Percent of Total Emissions</i>	20%	20%	21%	20%	20%	19%	16%
Commercial and Residential	45.05	45.50	42.89	43.54	37.37	37.94	39.36
<i>Residential Fuel Use</i>	29.19	29.64	27.34	28.14	22.87	23.29	24.20
Natural Gas	26.99	27.51	25.76	26.52	21.58	21.90	22.80
Other Fuels	2.21	2.13	1.58	1.62	1.28	1.39	1.40
<i>Commercial Fuel Use</i>	13.58	13.71	13.41	13.30	12.51	12.67	12.92
Natural Gas	11.17	11.33	11.25	11.28	10.39	10.50	10.89
Other Fuels	2.41	2.38	2.16	2.02	2.12	2.16	2.03
<i>Commercial Cogeneration Heat Output</i>	0.92	0.78	0.76	0.71	0.58	0.56	0.81
<i>Percent of Total Emissions</i>	10%	10%	10%	10%	8%	9%	9%
Industrial	91.50	90.94	91.07	93.73	93.96	91.58	89.61
<i>Refineries</i>	30.46	30.12	29.88	29.22	29.40	28.21	29.61
<i>General Fuel Use</i>	17.93	18.78	18.91	19.31	19.87	19.23	18.53
Natural Gas	13.46	14.50	14.48	14.36	15.56	14.79	14.99
Other Fuels	4.47	4.28	4.43	4.94	4.31	4.45	3.53
<i>Oil & Gas Extraction^a</i>	16.80	16.73	16.73	19.11	19.47	19.58	17.93
Fuel Use	15.01	14.91	14.87	16.99	17.18	17.22	15.66
Fugitive Emissions	1.80	1.82	1.86	2.12	2.29	2.36	2.27

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

	2010	2011	2012	2013	2014	2015	2016
<i>Cement Plants</i>	5.57	6.14	6.92	7.20	7.61	7.56	7.60
Clinker Production	3.46	4.08	4.65	4.93	5.27	5.17	5.15
Fuel Use	2.11	2.07	2.26	2.28	2.34	2.39	2.45
<i>Cogeneration Heat Output</i>	12.61	11.15	10.81	10.99	9.64	8.98	8.00
<i>Other Process Emissions</i>	8.13	8.02	7.81	7.90	7.98	8.01	7.95
<i>Percent of Total Emissions</i>	20%	20%	20%	21%	21%	21%	21%
Recycling and Waste	8.37	8.47	8.49	8.52	8.59	8.73	8.81
<i>Landfills^b</i>	8.11	8.19	8.20	8.22	8.28	8.40	8.47
<i>Composting</i>	0.26	0.27	0.29	0.30	0.31	0.33	0.34
<i>Percent of Total Emissions</i>	2%	2%	2%	2%	2%	2%	2%
High Global Warming Potential	13.52	14.54	15.54	16.65	17.70	18.93	19.78
<i>Ozone Depleting Substance Substitutes</i>	13.20	14.21	15.25	16.38	17.42	18.37	19.24
<i>Electricity Grid SF6 Losses^c</i>	0.24	0.25	0.24	0.18	0.14	0.42	0.37
<i>Semiconductor Manufacturing^b</i>	0.08	0.08	0.06	0.08	0.14	0.14	0.16
<i>Percent of Total Emissions</i>	3%	3%	3%	4%	4%	4%	5%
Agriculture^d	34.27	34.89	36.08	34.61	35.95	34.41	33.84
<i>Livestock</i>	24.00	23.84	24.47	23.49	23.81	23.10	22.99
Enteric Fermentation (Digestive Process)	12.13	11.98	12.10	11.78	11.85	11.40	11.35
Manure Management	11.86	11.86	12.38	11.71	11.96	11.70	11.64
<i>Crop Growing & Harvesting</i>	7.50	7.40	7.73	7.42	7.48	6.91	6.89
Fertilizers	5.78	5.67	5.93	5.65	5.72	5.28	5.25
Soil Preparation and Disturbances	1.64	1.65	1.73	1.69	1.68	1.56	1.56
Crop Residue Burning	0.08	0.08	0.08	0.08	0.08	0.08	0.08
<i>General Fuel Use</i>	2.77	3.65	3.88	3.71	4.66	4.39	3.95
Diesel	1.96	2.52	2.47	2.53	3.54	3.66	3.19
Natural Gas	0.65	0.66	0.70	0.69	0.63	0.64	0.72
Gasoline	0.16	0.48	0.71	0.49	0.49	0.10	0.04
Other Fuels	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Percent of Total Emissions</i>	8%	8%	8%	8%	8%	8%	8%
Total Net Emissions	448.11	443.91	450.38	447.59	444.10	441.40	429.35

^a Reflects emissions from combustion of fuels plus fugitive emissions.

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

^c This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.

^d Reflects use of updated USEPA models for determining emissions from livestock and fertilizers.

Source: California GHG Inventory for 2000–2016—by Category as Defined in the Climate Change Scoping

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

	2010	2011	2012	2013	2014	2015	2016
<i>Plan million metric tons of CO₂e—(based upon IPCC Second Assessment Report's Global Warming Potentials).</i>							

from water used on the Project Site. Table IV.C-4 below presents the GHG emissions associated with the existing land uses.

**Table IV.C-4
Existing (2017) Project Site Annual GHG Emissions Summary**

Scope	Metric Tons of Carbon Dioxide Equivalent ^a (MTCO ₂ e)
Area	<1
Energy	359
Mobile	301
Solid Waste	15
Water/Wastewater Generation	112
Total Emissions	787
<p><i>Numbers may not add up exactly due to rounding.</i></p> <p>^a CO₂e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Draft EIR.</p> <p>Source: Eyestone Environmental, 2018.</p>	

3. Project Impacts

a. Thresholds of Significance

(1) State CEQA Guidelines Appendix G

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

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

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

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify the GHG emissions of projects and consider several other factors that may be used in the determination of significance of project-related GHG emissions, including: 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)).⁷⁸ It is noted that the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

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.⁷⁹ 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.⁸⁰ 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."⁸¹ 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

⁷⁸ 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.

⁷⁹ 14 CCR § 15064(h)(3).

⁸⁰ 14 CCR § 15064(h)(3).

⁸¹ 14 CCR § 15064(h)(3).

project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.⁸²

In the absence of any adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. For this Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016 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 2008 Climate Change Scoping Plan and subsequent updates, the City of Los Angeles' LA Green Plan/ClimateLA, and the Sustainable City pLAN.

(2) SCAQMD Thresholds

As discussed above, SCAQMD has an interim GHG significance threshold of 10,000 MTCO_{2e} per year for stationary source/industrial projects where SCAQMD is the lead agency. This SCAQMD interim GHG significance threshold is not applicable to the Project as the Project is a residential/commercial project and the City of Los Angeles is the Lead Agency.

(3) 2006 L.A. CEQA Thresholds Guide

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

⁸² See, for example, *San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014)*, in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA..." Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 MTCO_{2e} /yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, *Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project*, SCH No. 2012041014 (October 2014); SCAQMD, *Final Negative Declaration for Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project*, SCH No. 2013091029 (December 2014); *Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA*, SCH No. 2014101040 (December 2014); and *Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project*, SCH No. 2014121014 (April 2014).

forth above, to answer both of the above Appendix G threshold questions, the City will consider whether the Project is consistent with AB 32 and SB 375 (through demonstration of conformance with the 2016 RTP/SCS), the LA Green Plan/ClimateLA, and the Sustainable City pLAn. As discussed above, OPR has noted that lead agencies “should make a good-faith effort to calculate or estimate GHG emissions from a project.”⁸³ GHG emissions are quantified below, consistent with OPR guidelines.

b. Methodology

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors be considered that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHGs). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA’s requirements for cumulative impact analysis (see Section 15064(h)(3)).⁸⁴

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

⁸³ OPR Technical Advisory, p. 5.

⁸⁴ See generally California Natural Resources Agency, *Final Statement of Reasons for Regulatory Action (December 2009)*, pp. 11-13, 14, 16; see also *Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009*. Available at http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf. Accessed August 21, 2018.

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

(1) Consistency with Plans

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

The OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Although the City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan, the City has adopted a number of plans to help reduce GHG emissions, including the LA Green Plan, Sustainable City pLAN, and Green Building Code, which encourage and require applicable projects to implement energy efficiency measures. In addition, the California CAT Report provides recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05. On a statewide level, the 2008 Climate Change Scoping Plan provides measures to achieve AB 32 targets. On a regional level, the SCAG 2016 RTP/SCS contains measures to achieve VMT reductions required under SB 375. Thus, if the Project complies with these plans, policies, regulations, and requirements, the Project would result in a less than significant impact because it would be consistent with the overarching state, regional, and local plans for GHG reduction.

A consistency analysis is provided below and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of the 2008 Climate Change Scoping Plan and subsequent updates, 2016 RTP/SCS, LA Green Plan/ClimateLA, and the Sustainable City pLAN.

(2) Quantification of Emissions

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

This Draft EIR quantifies the Project's annual GHG emissions and compares them to a Project without Reduction Features scenario, as defined by CARB's most updated projections for AB/SB 32.⁸⁵ This comparison is included herein for informational purposes only, including in order to disclose the relative carbon efficiency of the Project and to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. The Project without Reduction Features scenario does not account for energy efficiency measures that would exceed the Title 24 Building Standards Code or trip reductions from the co-location of uses and the availability of public transportation within 0.25 mile. However, the Project without Reduction Features does take into account certain regulatory measures included in the 2008 Climate Change Scoping Plan, 2016 RTP/SCS, LA Green Plan/Climate LA, and the Sustainable City pLAN.⁸⁶

(3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.⁸⁷ 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

⁸⁵ *The comparison to a so-called BAU scenario is not used as a threshold of significance, but is used to provide information and a quantitative metric to measure the Project's GHG emissions and level of reductions from Project Design Features and characteristics. See Center for Biological Diversity v. California Department of Fish and Wildlife (2015) 62 Cal.4th 204. While the California Supreme Court approved the methodology analyzing the significance of the project's GHG emissions in terms of reductions from projected BAU emissions consistent with AB 32's statewide reductions mandate, it held the GHG analysis lacked supporting substantial evidence and a cogent explanation correlating the project-specific reductions to AB 32's mandated state-wide reductions so as to demonstrate consistency with the latter's goals under the approved methodology.*

⁸⁶ *The CalEEMod model does not account for all regulatory measures in the Climate Change Scoping Plan. However, the analysis does take into account reductions due to Pavley and LCFS as discussed in further detail below.*

⁸⁷ *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

develop a standardized approach to the voluntary reporting of GHG emissions.”⁸⁸ Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the project. The information provided in this section is consistent with the General Reporting Protocol’s reporting requirements. A detailed discussion of the GHG methodology is included in Appendix B of this Draft EIR.

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

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).⁸⁹

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.⁹⁰ 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

⁸⁸ California Climate Action Registry, *General Reporting Protocol Version 3.1*, January 2009.

⁸⁹ 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.

⁹⁰ 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.

construction activities.”⁹¹ Therefore, direct and indirect emissions have been calculated for the Project.

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

The California Emissions Estimator Model[®] (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, which provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.⁹²

(4) Construction

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

The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove

⁹¹ *OPR Technical Advisory– CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, June 2008, p. 5.*

⁹² *California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod[™], www.caleemod.com.*

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

In accordance with SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, SCAQMD recommended that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.⁹³ Thus, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(5) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential 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.

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

GHG emissions associated with electricity usage are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, 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 Project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the

⁹³ SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008*.

Project's Traffic Impact Study, included as Appendix B of this Draft EIR.⁹⁴ The CalEEMod-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new residential, employee, and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

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

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

The GHG emissions related to water usage and wastewater generation are based on the Project's land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted.

The GHG emissions calculations for the Project include credits or reductions for implementation of relevant project design features set forth in this Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force in by Project buildout (e.g., Pavley I Standards, full implementation of California's Statewide RPS beyond current levels of renewable energy, and the California LCFS).⁹⁵ It should be noted that GHG reductions due to LCFS are currently not incorporated into CalEEMod. Calculations demonstrating LCFS reductions were performed outside of CalEEMod using CARB methodology and are presented in Appendix B of this Draft EIR.⁹⁶ In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of Project-generated trips as a result of Project characteristics (e.g., close proximity to transit) would provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not already in place, but are expected to be enforced in by Project buildout (e.g., Pavley II, which could further reduce GHG emissions

⁹⁴ *Gibson Transportation Consulting Inc., Transportation Impact Study for the Modera Argyle Project, Hollywood, California, March 2018.*

⁹⁵ *Project design features are based on relevant year 2020 targets established by AB 32 and the current CARB Scoping Plan Update.*

⁹⁶ *LCFS Percent Reductions, www.arb.ca.gov/fuels/lcfs/2018-0815_illustrative_compliance_scenario_calc.xlsx, accessed January 3, 2019.*

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

c. Analysis of Project Impacts

(1) Project Design Features

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

- GHG-PDF-1:** The design of the new buildings shall incorporate features of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program to be capable of meeting the standards of LEED® Certified or equivalent green building standards. Specific sustainability features that are integrated into the Project design to enable the Project to achieve LEED® Certified certification shall include, but are not limited to the following:
- a. Exceeding Title 24, Part 6, California Energy Code baseline standard requirements by 10 percent for energy efficiency, based on the 2016 Building Energy Efficiency Standards requirements.
 - b. Use of Energy Star-labeled products and appliances.
 - c. 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.
 - d. Water-efficient plantings with drought-tolerant species;
 - e. Fenestration designed for solar orientation; and
 - f. Pedestrian- and bicycle-friendly design with short-term and long-term bicycle parking.
- GHG-PDF-2:** The Project would prohibit the use of natural gas-fueled fireplaces in the proposed residential units.
- GHG-PDF-3:** The Applicant shall provide at least 20 percent of the total code-required parking spaces provided for all types of parking facilities, but in no case less than one location, capable of supporting future electric vehicle supply equipment (EVSE). Plans shall indicate the proposed type and location(s) of EVSE and also include raceway method(s), wiring schematics and electrical calculations to verify that

the electrical system has sufficient capacity to simultaneously charge all electric vehicles (EVs) at all designated EV charging locations at their full rated amperage. Plan design shall be based upon Level 2 or greater EVSE at its maximum operating capacity. Only raceways and related components are required to be installed at the time of construction. When the application of the 20 percent results in a fractional space, round up to the next whole number. A label stating “EV CAPABLE” shall be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

GHG-PDF-4: A minimum of 5 percent of the total code-required parking spaces shall be equipped with EV charging stations. Project plans shall indicate the proposed type and location(s) of charging stations. Plan design shall be based on Level 2 or greater EVSE at its maximum operating capacity. When the application of the 5-percent requirement results in a fractional space, round up to the next whole number.

In addition, as part of the proposed Project, the Applicant would incorporate project features to further support and promote environmental sustainability. Specifically, the Project would include water conservation and waste reduction measures as set forth in Section IV.1.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.

(2) Project Impacts

Would the Project:

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

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

(a) Consistency with Applicable Plans and Policies

As explained above, compliance with applicable GHG emissions reduction plans would result in a less-than-significant Project and cumulative impact. The following section describes the extent to which the Project complies with or exceeds the performance-based standards included in the regulations outlined in the 2008 Climate Change Scoping Plan and subsequent updates, the 2016 RTP/SCS, the LA Green Plan/ClimateLA, and the Sustainable City pLAN. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

(i) Climate Change Scoping Plan

As previously discussed, the goal to reduce GHG emissions to 1990 levels by 2020 (Executive Order S-3-05) was codified by the Legislature as AB 32. In 2016, SB 32 was signed into law to include an emission reduction goal for the year 2030. The 2017 Update was updated to include 2030 targets specified in SB 32. The 2008 Climate Change Scoping Plan sets forth a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The following discussion demonstrates how the pertinent reduction actions relate to and reduce project-related GHG emissions.

Project GHG emissions are quantified further below as shown in Table IV.C-10 on page IV.C-78. The Project would result in 2,049 MTCO₂e annually. The breakdown of emissions by source category shows approximately less than one percent from area sources; 37 percent from energy consumption; 52 percent from mobile sources; less than one percent from stationary sources; three percent from solid waste generation; two percent from water supply, treatment, and distribution; and five percent from construction activities. Also shown in Table IV.C-10 are Project GHG emissions without Reduction Features. Such Reduction Features include fewer vehicle miles travelled due to shorter distance to job centers; mass transit availability; energy efficiency improvements beyond code requirements; mandatory waste diversion and recycling; and water usage reduction beyond code requirements. These Reduction Features are discussed in further detail below. A comparison of the Project with and without Reduction Features would demonstrate how the Project would reduce GHG emissions consistent with the goals of AB 32.

Provided in Table IV.C-5 on page IV.C-48 is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Project would be consistent with or exceed the reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and First Update.⁹⁷ As discussed therein, the Project would be consistent with the GHG reduction-related actions and strategies of the 2008 Climate Change Scoping Plan and the First Update, which are intended to reduce GHG emissions.

The 2017 Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the 2008 Climate Change Scoping Plan and First Update shown on Table IV.C-5. A summary of these policies and measures are provided in Table IV.C-6 on page IV.C-56. Although a number

⁹⁷ *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.C-5
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
Area (Less than one percent of Project inventory)		
SCAQMD Rule 445 (Wood Burning Devices): Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	Consistent. GHG-PDF-2 prohibits the installation of fireplaces within residential units. The Project also would not use wood burning devices or stoves. The Project would be consistent with this regulation.
Energy (37 percent of Project inventory)		
California RPS program: SB 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. 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.	LADWP	Consistent. LADWP’s commitment to achieve 35 percent renewables by 2020 would exceed the requirement under the RPS program of 33 percent renewables by 2020. In 2018, LADWP indicated that 30 percent of its electricity came from renewable resources in Year 2017. ^a As LADWP would provide electricity service to the Project Site, the Project would use electricity that is produced consistent with this performance based standard. Electricity GHG emissions provided in Table IV.C-10 on page IV.C-78 assume that LADWP will receive at least 33 percent of its electricity from renewable sources by the year 2020 and 50 percent by the year 2030 (with a straight line interpolation for the Project buildout year of 2023), as required by SB 350, which is discussed below. The analysis conservatively does not include the updated RPS goals outlined in SB 100.
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 LADWP	Consistent. LADWP would be required to meet this performance-based standard. As LADWP would provide electricity service to the Project Site, the Project by 2030 would use electricity consistent with this performance-based standard. Project buildout would occur in Year 2023 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.C-10 on page IV.C-78 would be further reduced by 17 percent 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

**Table IV.C-5 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems and insulation. The Project would further support this action/strategy because it includes GHG-PDF-1, which would require the Project to achieve LEED Certified or equivalent green building standards, thus reducing overall energy usage compared to baseline conditions.
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. LADWP meets the requirements of SB 1368. As LADWP would provide electricity service to the Project Site, the Project would use electricity that meets the requirements under SB 1368.
California Code of Regulations (CCR), Title 20: The 2016 Appliance Efficiency Regulations, adopted by the California Energy Commission (CEC), include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	Consistent. The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Project would result in new land use development that would be outfitted with appliances and lighting that comply with CEC’s standards. In addition, GHG-PDF-1 would require the Project to achieve LEED® Certified or equivalent green building standards, thus reducing overall energy usage compared to baseline conditions.
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 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	State and CEC	Consistent. Consistent with regulatory requirements, the Project shall comply with applicable provisions of the 2017 Los Angeles Green Building Code that in turn requires compliance with mandatory standards included in the California Green Building Standards. The 2016 Title 24 standards are 28 percent more efficient (for electricity) than residential construction built to the 2013 Title 24 standards and 5 percent more efficient (for electricity) for non-residential construction built to 2013 Title 24 standards.° The 2016 Title 24 standards are more efficient than the 2020 Projected Emissions under Business-as-Usual in CARB’s 2008 Climate Action Scoping Plan. The standards promote the use of better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. The Project would further support this regulation since GHG-PDF-1 would require the Project to achieve LEED® Certified or equivalent

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

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
conservation, and internal air contaminants.		green building standards, thus reducing overall energy usage compared to baseline conditions. Thus, the Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the 2008 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 Project and, thus, reduce energy usage associated with lighting. Electricity GHG emissions provided in Table IV.C-10 on page IV.C-78 conservatively account for a 25-percent reduction in lighting electricity consumption with implementation of GHG-PDF-1 and consistent with this regulation.
AB 1109: The Lighting Efficiency and Toxic Reduction Act prohibits a person from manufacturing for sale in the state specified general purpose lights that contain levels of hazardous substances, as it requires the establishment of minimum energy efficiency standards for all general service incandescent lamps. The standards are structured to reduce average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. ^d	State/ Manufacturers	Consistent. As with the EISA, discussed above, the Project would meet the requirements under AB 1109 because it incorporates energy efficient lighting and electricity consumption. Additionally, the Project would comply with local and state green building programs, as discussed throughout this 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 2008 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, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. Therefore, GHG emissions associated with the Project's electricity usage per year presented in Table IV.C-10 on page IV.C-78 would indirectly be covered by the Cap-and-Trade Program (as LADWP would be a covered entity) and would be consistent with AB 32 and the 2008

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

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		Climate Change Scoping Plan.
<p>Million Solar Roofs Program: The program is implemented through SB 1 (Murray, 2006), which provides up to \$3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.</p>		<p>Consistent. GHG-PDF-1 would require the proposed Project to achieve LEED® Certified or equivalent green building standards (e.g., the building could include photovoltaic panels on portions of the roof). In addition, Title 24 requires rooftop areas on high-rise multi-family buildings and nonresidential buildings to set aside a minimum area for potentially installing solar panels at a later date.</p>
Mobile (52 percent of Project inventory)		
<p>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).</p>	State, CARB	<p>Consistent. The Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and reduced GHG emissions by about 30 percent in 2016, all while improving fuel efficiency. This regulatory program applies to vehicle manufacturers, not directly to land use development. Vehicular travel associated with the Project would benefit from this regulation in the form of reduced GHG emissions because vehicle trips would be affected by AB 1493. Mobile source emissions generated by Project tenants, employees, and visitors 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.C-10 on page IV.C-78 were calculated using CalEEMod which includes implementation of AB 1493 into mobile source emission factors.</p>
<p>Executive Order S-01-07: The 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}</p>	State, CARB	<p>Consistent. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with LCFS. Mobile source GHG emissions provided in Table IV.C-10 on page IV.C-78 were calculated using CalEEMod which includes implementation of the LCFS into mobile source emission factors.</p>
<p>Advanced Clean Cars Program: In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through</p>	State, CARB	<p>Consistent. Similar to AB 1493, this regulatory program applies to manufacturers, not directly to land use development. Standards under the Advanced Clean Cars Program will apply to all passenger and light</p>

**Table IV.C-5 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>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.</p>		<p>duty trucks used by customers, employees, and deliveries to the Project. GHG emissions generated by Project-related vehicular travel would benefit from this regulation and mobile source emissions generated by the 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.C-10 on page IV.C-78, conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation. The Project would further support this regulation since the Applicant will provide at least 20 percent of the total code-required parking spaces provided to be capable of supporting future EVSE as dictated by GHG-PDF-3 and the Applicant will provide at least 5 percent of the total code-required parking spaces provided with EV charging stations as dictated by GHG-PDF-4.</p>
<p>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.</p>	<p>State, CARB Regional, SCAG</p>	<p>Consistent. SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would concentrate new residential and commercial retail and restaurant uses within an HQT. Therefore, the Project would be consistent with SCAG’s 2016 RTP/SCS as it is located within an HQT. Furthermore, the 2016 RTP/SCS would result in an estimated 18-percent decrease in per capita passenger vehicle GHG emissions by 2035 and 21-percent decrease in per capita passenger vehicle GHG emissions by 2040 within the SCAG region. As discussed above, CARB updated the SB 375 targets for the SCAG region, requiring a 19-percent decrease in VMT by 2035. Implementation of the 2016 RTP/SCS or the next plan is expected to fulfill and exceed the region’s obligations under SB 375 with respect to meeting the State’s GHG emission reduction goals. As discussed below, the Project results in a mobile GHG emissions reduction of approximately 66 percent (see Appendix B of this Draft EIR) compared to a Project without Reduction Features and would be less than the reduction targets in the 2016 RTP/SCS and CARB’s updated 2035 target. Therefore, the Project would be consistent with SB 375,</p>

**Table IV.C-5 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		the reduction in transportation emission per capita provided in the 2016 RTP/SCS, and with CARB's updated 2035 target.
Solid Waste (Three percent of Project inventory)		
<p>California Integrated Waste Management Act of 1989 (AB 939) and AB 341: AB 939 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.⁹</p> <p>AB 341 amended AB 939 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</p>	State	<p>Consistent. GHG emissions related to solid waste generation from the 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. Project-related GHG emissions from solid waste generation provided in Table IV.C-10 on page IV.C-78 includes a 50-percent reduction in solid waste generation source emissions consistent with the minimum diversion rate required for the City of Los Angeles. The Applicant shall also only contract for waste disposal services with a company that recycles solid waste in compliance with AB 341. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. Further, the Project would recycle and/or salvage at least 75 percent of non-hazardous construction and demolition debris, and that each applicant prepare a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled.</p>
Water (Two percent of project inventory)		
<p>CCR, Title 24, Building Standards Code: The California Green Building Standards Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.</p>	State	<p>Consistent. The Project would comply with applicable provisions of the 2017 Los Angeles Green Building Code which in turn requires compliance with mandatory standards included in the California Green Building Standards (20-percent overall water use reduction). Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2016 CALGreen, 2017 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code and reflects approximately a 20 percent reduction in water usage as compared to the base demand.</p>
<p>SB X7-7: The Water Conservation Act of 2009 sets an overall goal of reducing per-capita urban water use by 20</p>	State	<p>Consistent. As discussed above under Title 24, the Project would incorporate water conservation features that would contribute towards</p>

**Table IV.C-5 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the AB 32 Scoping Plan. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.</p>		<p>meeting this performance-based standard. Project Design Feature WAT-PDF-1 in Section IV.I.1, Utilities and Service Systems---Water Supply and Infrastructure, of this Draft EIR, provides a specific list of water conservation measures. Examples include: dual-flush water closets and no-flush or waterless urinals, residential bathroom faucets with flow rate of 1.0 gallons per minute, non-residential restroom faucets with a maximum flow rate of 0.5 gallon per minute and non-residential kitchen faucets (except restaurant kitchens) with a maximum flow rate of 1.5 gallons per minute, tankless and on-demand water heaters in commercial kitchens and restrooms, and use of landscape contouring to minimize precipitation runoff, among others. The Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.</p>
<p>Construction (Five percent of Project inventory)</p>		
<p>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.</p>	<p>CARB</p>	<p>Consistent. The Applicant would use construction contractors that would comply with this regulation.</p>
<p>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</p>	<p>CARB</p>	<p>Consistent. The Applicant would use construction contractors that would comply with this regulation.</p>
<p>^a California Energy Commission, <i>Utility Annual Power Content Labels for 2017</i>, www.energy.ca.gov/pcl/labels/, accessed December 27, 2018. ^b Senate Bill 350 (2015–2016 Reg. Session) Stats 2015, Ch. 547. ^c CEC, <i>Adoption Hearing, 2016 Building Energy Efficiency Standards</i>. ^d 2007b. Assembly Bill 1109 (2007–2008 Reg. Session) Stats. 2007, Ch. 534. ^e CARB, <i>Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary</i></p>		

**Table IV.C-5 (Continued)
Consistency Analysis—Climate Change Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p><i>Sources, October 23, 2009.</i></p> <p>^f <i>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.</i></p> <p>^g <i>Cal. Pub. Res. Code § 41780(a).</i></p> <p>^h <i>Cal. Pub. Res. Code § 41780.01(a).</i></p> <p>ⁱ <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 December 14, 2017.</i></p> <p><i>Source: Eyestone Environmental, 2019.</i></p>		

**Table IV.C-6
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>SB 350:</p> <p>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.^a</p> <p>Required measures include:</p> <ul style="list-style-type: none"> • Increase RPS to 50 percent of retail sales by 2030. • Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. • Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. 	<p>CPUC, CEC, CARB</p>	<p>Consistent. LADWP is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As LADWP would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350. It is assumed that LADWP will receive at least 33 percent of electricity from renewable sources by year 2020 and 50 percent by the year 2030 (with a straight-line interpolation for the Project buildout year of 2025).</p> <p>As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation.</p> <p>The Project would further support this action/strategy because it includes GHG-PDF-1, which would require the Project to achieve LEED® Certified or equivalent green building standards, thus reducing overall energy usage compared to baseline conditions.</p>
<p>Implement Mobile Source Strategy (Cleaner Technology and Fuels)</p> <ul style="list-style-type: none"> • At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025. • At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030. • Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations. 	<p>CARB, CalSTA, SGC, Caltrans, CEC, OPR, Local agencies</p>	<p>Consistent. The CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program likely will apply to all passenger and light duty trucks used by customers, employees, and deliveries to the Project, depending on the outcome of ongoing negotiations between CARB and EPA regarding federal standards. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and</p>

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<ul style="list-style-type: none"> • Medium- and heavy-duty GHG Phase 2. • Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard. • Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030. • Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.” 		<p>continue adding zero emission and plug in vehicles through 2030. In addition, the Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring in a combined total of at least five percent of the total code-required parking spaces for the Project, consistent with GHG-PDF-4.</p> <p>CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.^{b,c}</p> <p>GHG emissions generated by Project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the 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.C-10 on page IV.C-78 conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Project would also benefit from these measures once adopted.</p> <p>SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Project represents an infill development within an existing urbanized area that would concentrate new residential and commercial retail and restaurant uses within an HQTAs. Therefore, the Project would be consistent with SCAG’s 2016 RTP/SCS, as it is located within an HQTAs. Furthermore, the 2016 RTP/SCS would result in an estimated 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. As discussed above, CARB has updated the SB 375</p>

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
		<p>targets for the SCAG region, requiring a 19-percent decrease in GHG emissions by 2035. Implementation of the 2016 RTP/SCS or the next iteration of the RTP/SCS is expected to fulfill and exceed the region's obligations under SB 375 with respect to meeting the State's GHG emission reduction goals. As discussed below, Project results in a mobile GHG emissions reduction of approximately 66 percent (see Appendix B of this Draft EIR) and, therefore, the Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016 RTP/SCS, and with CARB's updated 2035 target.</p>
<p>Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets)</p>	<p>CARB</p>	<p>Consistent. Under SB 375, the CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, the CARB established targets for 2020 and 2035 for each region. As required under SB 375, the CARB is required to update regional GHG emissions targets every 8 years with the last update formally adopted in March 2018. As part of the 2018 updates, the CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035.</p> <p>The Project would be consistent with SB 375 for developing an infill project within an existing urbanized area. This would concentrate new residential and commercial retail and restaurant uses within an HQT. Project-related transportation emissions would be reduced by approximately 66 percent (see Appendix B of this Draft EIR) which is greater than the percent reduction targets in the 2016-2040 RTP/SCS. Therefore, the Project would be consistent with SB 375 and the 2016 RTP/SCS.</p>
<p>By 2019, adjust performance measures used to select and design transportation facilities.</p> <ul style="list-style-type: none"> • Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline 	<p>CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans</p>	<p>Consistent. The Project would not involve construction of transportation facilities. However, the Project is located approximately 0.28 mile from the Metro Red Line Hollywood/Vine Station. The Project benefits from this station by encouraging use of mass transit resulting in a reduction of Project-related vehicle trips to and from the</p>

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
documents, funding programs, project selection, etc.).		Project Site.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR/SGC, CARB	Consistent. The Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring in a combined total of at least five percent of the total code-required parking spaces for the Project, consistent with GHG-PDF-4. In addition, electric vehicle supply wiring (EV ready) will be available in at least 20 percent of the total code-required parking spaces for the Project consistent with Project Design Feature GHG-PDF-3.
Implement California Sustainable Freight Action Plan: <ul style="list-style-type: none"> • Improve freight system efficiency. • Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030. 	CARB	Not Applicable. The Project land uses would not include freight transportation or warehousing. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent.	CARB	Consistent. This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with LCFS. Mobile source GHG emissions provided in Table IV.C-10 on page IV.C-78 were calculated using CalEEMod which includes implementation of the LCFS into mobile source emission factors. The current LCFS, adopted in 2007, requires a reduction of at least 10 percent in the carbon intensity (CI) of California's transportation fuels by 2020. On September 27, 2018, CARB approved an amendment to the LCFS regulation to require a 20 percent reduction in CI from a 2010 baseline by 2030. Reductions in CI are phased in starting in 2019 with a reduction of 6.25 percent and increases by 1.25 percent each year. ^d

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>Implement the Short-Lived Climate Pollutant Strategy by 2030:</p> <ul style="list-style-type: none"> • 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels. 	<p>CARB, CalRecycle, CDFA, SWRCB, Local air districts</p>	<p>Consistent. SB 605 was adopted in 2014 which directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. SB 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.^e</p> <p>The Project would comply with the CARB SLCP Reduction Strategy which limits the use of hydrofluorocarbons for refrigeration uses.</p>
<p>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.</p>	<p>CARB, CalRecycle, CDFA, SWRCB, Local air districts</p>	<p>Consistent. Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50 percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025. As of March 2018, CalRecycle is currently holding workshops to review draft regulatory language. Adoption of the regulations to achieve SB 1383 targets is expected in early 2019.^f</p> <p>The Project would be consistent with AB 341 which requires not less than 75 percent of solid waste generated be source reduced through recycling, composting or diversion. Compliance with AB 341 would also help achieve the goals of SB 1383.</p>
<p>Implement the post-2020 Cap-and-Trade Program with declining annual caps.</p>	<p>CARB</p>	<p>Consistent. The current Cap-and-Trade program would end on December 31, 2020. AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions. Under the Cap-and-Trade program, entities such as power generation companies and natural gas processing plants would be required to limit or reduce GHG emissions. This would result in a reduction of GHG emissions associated with the Project's energy usage. As the Project would not impede the Program's progress, the Project is considered consistent.</p>

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California’s land base as a net carbon sink:</p> <ul style="list-style-type: none"> • Protect land from conversion through conservation easements and other incentives. • Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity • Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments • Establish scenario projections to serve as the foundation for the Implementation Plan 	<p>CNRA and departments within, CDFG, CalEPA, CARB</p>	<p>Not Applicable. This regulatory program applies to Natural and Working Lands, not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.</p>
<p>Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018</p>	<p>CARB</p>	<p>Not Applicable. This regulatory program applies to Natural and Working Lands, not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.</p>
<p>Implement Forest Carbon Plan</p>	<p>CNRA, CAL FIRE, CalEPA and departments within</p>	<p>Not Applicable. This regulatory program applies to state and federal forest land, not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Forest Carbon Plan.</p>
<p>Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.</p>	<p>State Agencies & Local Agencies</p>	<p>Not Applicable. Funding and financing mechanisms are the responsibility of the state and local agencies. The Project would not conflict with funding and financing mechanisms to support GHG reductions.</p>
<p>^a Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.</p> <p>^b CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm.</p> <p>^c CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), www.arb.ca.gov/msprog/actruck/actruck.htm.</p>		

**Table IV.C-6 (Continued)
Consistency Analysis—2017 Update**

Actions and Strategies	Responsible Party(ies)	Project Consistency Analysis
<p>^d CARB, <i>Final Regulation Order</i>.</p> <p>^e CARB, <i>Reducing Short-Lived Climate Pollutants in California</i>, www.arb.ca.gov/cc/shortlived/shortlived.htm.</p> <p>^f CARB, <i>Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions</i>, www.calrecycle.ca.gov/climate/slcp/.</p> <p>Source: Eyestone Environmental, 2019.</p>		

of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

As such, based on the analysis above, the Project would be consistent with the GHG reduction-related actions and strategies in the 2008 Climate Change Scoping Plan and subsequent updates. As such, impacts related to consistency with the Climate Change Scoping Plan would be less than significant.

(ii) 2016 RTP/SCS

The 2016 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions of 9 percent by 2020 and 16 percent by 2035.⁹⁸ Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.⁹⁹

The 2016 RTP/SCS would result in an estimated 8-percent decrease in per capita passenger vehicle GHG emissions by 2020, 18-percent decrease in per capita passenger vehicle GHG emissions by 2035, and 21-percent decrease in per capita passenger vehicle GHG emissions by 2040.¹⁰⁰ In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed 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 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 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

⁹⁸ CARB, *Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375, Resolution 10-31*.

⁹⁹ SCAG, *Final 2016–2040, RTP/SCS, April 2016*, p. 153.

¹⁰⁰ SCAG, *Final 2016–2040, RTP/SCS, April 2016*, p. 153.

Project, strategies and policies set forth in the 2016 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.

Consistency with Integrated Growth Forecast

The 2016 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. According to the 2016 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2017 is approximately 3,981,911 persons.¹⁰¹ In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,145,604 persons.¹⁰² Based on a household size factor of 2.43 persons per household for multi-family housing units, the Project is estimated to generate a residential population of 671 persons at full buildout.¹⁰³ The estimated 671 net new residents generated by the Project would represent approximately 0.41 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2017 and 2023. Development of the Project would result in approximately 73 employment positions on the Project Site, based on employee generation rates developed by the Los Angeles Unified School District (LAUSD). This employee generation is based on the grocery store option, which has a higher employee generation as compared to the neighborhood-serving commercial retail and restaurant option, which generates 65 employment positions due to less square footage.¹⁰⁴ According to the 2016 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2017 is approximately 1,780,811 employees.¹⁰⁵ In 2023, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have approximately 1,882,104 employees.¹⁰⁶ Thus, the Project's estimated 73 employees would constitute approximately 0.06 percent of the employment growth forecasted between 2017 and 2023. Accordingly, the Project's generation of residents and employees would be consistent with the population and employment projections contained

¹⁰¹ *Based on a linear interpolation of 2012–2040 data.*

¹⁰² *Based on a linear interpolation of 2012–2040 data.*

¹⁰³ *Based on a 2.43 persons per household rate for multi-family units based on the 2016 American Community Survey 5-Year Average Estimates (2012-2016) per correspondence with Jack Tsao, Research Analyst II, Los Angeles Department of City Planning, March 22, 2018.*

¹⁰⁴ *Los Angeles Unified School District, 2012 Developer Fee Justification Study, February 9, 2012, Table 11. Based on the employee generation rate for "Neighborhood Shopping Center" land uses, which is 0.00271 employee per average square foot.*

¹⁰⁵ *Based on a linear interpolation of 2012–2040 data.*

¹⁰⁶ *Based on a linear interpolation of 2012–2040 data.*

in the 2016 RTP/SCS. Refer to Section IV.D, Land Use, of this Draft EIR, for additional information regarding consistency with the 2016 RTP/SCS.

Consistency with VMT Reduction Strategies and Policies

The 2016 RTP/SCS includes, for the SCAG region as a whole, a daily 22.8 Total VMT per capita for the 2012 Base Year, and a daily 20.5 Total VMT per capita for the 2040 Plan Year. For Los Angeles County, the 2012 Base Year daily Total VMT per capita is 21.5 and the daily Total VMT per capita is 18.4 for the 2040 Plan Year. To analyze the consistency of the Project with the 2016 RTP/SCS for informational purposes, the Project's Total Daily VMT was divided by the Project's Service population to arrive at the per capita Total Daily VMT estimates. The estimate, as provided in Table IV.C-7 on page IV.C-66, was compared to SCAG's VMT data for the region and Los Angeles County provided by the 2016 RTP/SCS, which in both instances the Project's per capita Total VMT estimate was lower. As shown in Appendix B of the Draft EIR, the Project design includes characteristics that would reduce trips and VMT as compared to the Project without implementation of VMT reducing measures within the Air Basin as measured by CalEEMod. These relative reductions in vehicle trips and VMT from the Project without implementation of VMT reducing measures within the Air Basin help quantify the GHG emissions reductions achieved by locating the Project in an infill, HQTAs location that promotes alternative modes of transportation. Specifically, the Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*,¹⁰⁷ which identifies the VMT and vehicle trips reductions for the Project Site relative to the standard trip and VMT rates in CalEEMod, which corresponds to reduction in relative GHG emissions. Measures applicable to the Project include the following; a brief description of the Project's relevance to the measure is also provided:

- **CAPCOA Measure LUT-1—Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduced emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services. The Project would increase the site density from zero dwelling units per acre and 152 jobs per acre to approximately 251 dwelling units per acre and 66 jobs per acre.
- **CAPCOA Measure LUT-3—Increase Diversity of Urban and Suburban Developments (Mixed-Uses):** The Project would introduce new uses on the Project Site, including new residential and commercial retail and restaurant uses in proximity to other existing off-site residential and commercial retail and restaurant uses. The increases in land use diversity and mix of uses on the

¹⁰⁷ CAPCOA, *Quantifying Greenhouse Gas Mitigation Measures*, 2010.

**Table IV.C-7
Comparison of Project Total VMT/Capita to 2016 RTP/SCS**

Scenario	Daily Weekday Trips
Total VMT (Project) ^a	6,000 Daily VMT
Service Population ^b	576
Total VMT Per Capita	10.4 VMT/Capita (Daily)
<p>^a VMT was calculated using CalEEMod and the results are provided in Section 2.0 of the corresponding CalEEMod output files within Appendix B of this Draft EIR.</p> <p>^b The "Service Population" includes residents (671) and workers (73) less the Baseline "Service Population" of 168 workers.</p> <p>Source: Eyestone Environmental, 2019.</p>	

Project Site would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation (i.e., walking and biking), which would result in corresponding reductions in transportation-related emissions.

- CAPCOA Measure LUT-5—Increase Transit Accessibility:** The Project would be located approximately 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT DASH lines. The Project would also provide bicycle parking spaces for the proposed uses to encourage utilization of alternative modes of transportation.
- CAPCOA Measure LUT-6—Integrate Affordable and Below Market Rate Housing:** Below market rate housing provides greater opportunity for people to live closer to job centers and to accommodate more people in urban infill areas. The Project would include 13 affordable units (5 percent of the Project Site's base density) that would be restricted to Very Low Income households, which would result in an increase in alternative transit usage and a corresponding reduction in transportation-related emissions.
- CAPCOA Measure LUT-9—Improve Design of Development:** The Project would remove the existing warehouse, office, and commercial uses and enhance the pedestrian environment by developing a mix of uses to improve pedestrian activation of the street.
- CAPCOA Measure SDT-1—Provide Pedestrian Network Improvements:** Project design would provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive.

As shown in Table IV.C-7, the Total Project VMT per capita of 10.4 VMT per day would be well below the overall SCAG region's daily 20.5 Total VMT per capita for the 2040

Plan Year and Los Angeles County's 18.4 daily Total VMT per capita for the 2040 Plan Year. In addition, the Project results in a VMT reduction of approximately 71 percent and a 66-percent reduction in GHG emissions from mobile sources in comparison to a Project without Reduction Features, which would be consistent with the reduction in transportation emission per capita provided in the 2016 RTP/SCS. This reduction is attributable to the Project characteristics of being an infill project near transit that supports multi-modal transportation options. It should be noted that the above VMT per capita calculation is provided for informational purposes only, to demonstrate the Project's consistency with the 2016 RTP/SCS, and is not considered a threshold of significance (as no such numeric thresholds have been adopted).¹⁰⁸

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

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

The Project represents an infill development within an existing urbanized area that would concentrate new residential and commercial retail and restaurant uses within an HQTA, which is defined by the 2016 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours (see Section IV.D, Land Use and Planning, of this Draft EIR for further details). The Project Site is located 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT DASH lines. Furthermore, the Project would provide short- and long-term bicycle parking spaces as required by the LAMC, in addition to bicycle-serving amenities that would further encourage biking. Additionally, the Project was designed to encourage walkability through a mix of uses (residential and commercial retail and restaurant). These and other measures would

¹⁰⁸ *As this calculation is provided for informational purposes only and is not being utilized as a significance threshold, the analysis is consistent with the holding of Golden Door Properties, LLC v. County of San Diego/Sierra Club, LLC v. County of San Diego (2018) 27 Cal.App.5th 892.*

further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of SCAG's 2016 RTP/SCS.

Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2016 RTP/SCS, with regard to individual development projects, such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2016 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would provide at least 20 percent of the total code-required parking spaces provided to be capable of supporting future EVSE as dictated by GHG-PDF-3 and the Applicant will provide at least 5 percent of the total code-required parking spaces provided with EV charging stations as dictated by GHG-PDF-4.

Energy Efficiency Strategies and Policies

The third important goal within the 2016 RTP/SCS for individual developments, such as the Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2016 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed above, the Project will incorporate project design features to reduce the amount of energy used by the Project. Specifically, GHG-PDF-1 would ensure that Project energy usage would be optimized. In addition, Project Design Feature GHG-PDF-2 prohibits the use of natural gas fireplaces within residential units throughout the Project Site, which would reduce GHG emissions resulting from natural gas combustion. The Project would also install Energy Star dishwashers and washing machines to reduce electricity and natural gas usage with Title 24 sources by 10 percent. In total, Project GHG emissions from electricity and natural gas usage would be reduced by eight percent with implementation of project design features.

Land Use Assumptions

At the regional level, the 2016 RTP/SCS is a plan adopted for the purpose of reducing GHGs. In order to assess the Project's potential to conflict with the 2016 RTP/SCS, this Draft EIR also analyzes the 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 the 2016 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project's consistency with the applicable goals and principles set forth in the 2016 RTP/SCS is analyzed in Table IV.D-5 on page IV.D-63 of Section IV.D, Land Use, of

the Draft EIR. As shown in Table IV.D-5 the Project is consistent with the goals and principles set forth in the 2016 RTP/SCS.¹⁰⁹

In sum, the Project is the type of land use development that is encouraged by the 2016 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.¹¹⁰ By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements.

Therefore, the Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016 RTP/SCS. Overall, the Project would not conflict with the 2016 RTP/SCS, which is intended to reduce GHG emissions. As such, impacts related to consistency with the 2016 RTP/SCS would be less than significant.

(iii) LA Green Plan/ClimateLA

The Project would be consistent with the LA Green Plan/ClimateLA.¹¹¹ The LA Green Plan/ClimateLA 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.C-8 on page IV.C-70, provides a discussion of the Project's consistency with applicable GHG-reducing actions from the LA Green Plan/ClimateLA. As discussed below, the Project is consistent with the applicable goals and actions of the LA Green Plan/ClimateLA. To facilitate implementation of the LA Green Plan/ClimateLA, the City adopted the Los Angeles Green Code. The 2017 Los Angeles Green Building Code (Chapter IX, Article 9, of the LAMC, as amended pursuant to City of Los Angeles Ordinance No. 184,692), incorporated by reference the mandatory requirements of the 2016 California Green Building Standards Code (discussed above under 2008 Climate Change Scoping Plan). The Project would substantially surpass the performance-based standards included in the Green Building Code (e.g., 2016 Building Energy Efficiency Standards).

GHG-PDF-1 would require the design of the new buildings to incorporate features to achieve the sustainability intent of the Certified Rating under the LEED® green building program or equivalent green building standards. In addition, Project Design Feature

¹⁰⁹ As discussed in the 2016 RTP/SCS, the actions and strategies included in the 2016 RTP/SCS remain unchanged from those adopted in the 2012–2035 RTP/SCS.

¹¹⁰ As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.

¹¹¹ City of Los Angeles, *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming*, 2007.

**Table IV.C-8
Consistency with Applicable GHG Emissions Goals and Actions of LA Green Plan**

Action	Description	Consistency Analysis
Focus Area: Energy		
E6	Present a comprehensive set of green building policies to guide and support private sector development.	Not Applicable. While this action primarily applies to the City, the Project would be designed and operated to meet or exceed the applicable requirements of the state Green Building Standards Code and the City of Los Angeles Green Building Code.
Focus Area: Water		
W1	Meet all additional demand for water resulting from growth through water conservation and recycling.	<p>The Mayor's Office and LADWP developed the <i>Securing LA's Water Supply</i> plan, which is an aggressive, multi-faceted approach to developing a locally sustainable water supply. The plan includes a set of key short-term and long-term strategies to secure our water future, such as:</p> <p>Short-Term Conservation Strategies:</p> <ul style="list-style-type: none"> • Enforcing prohibited uses of water (levying fines and sanctions against water abusers and increase water conservation awareness). • Expanding the list of prohibited uses of water (possible further restrictions on watering landscape and washing/rinsing vehicles without a self-closing nozzle). • Extending outreach efforts, water conservation incentives, and rebates. • Encouraging regional conservation measures (encourage all water agencies in the region to adopt water conservation ordinances which include prohibited uses and enforcement). <p>Long-Term Conservation Strategies:</p> <ul style="list-style-type: none"> • Increasing water conservation through reduction of outdoor water use and new technology. • Maximizing water recycling. • Enhancing stormwater capture • Accelerating clean-up of the <p>Consistent. While this action primarily applies to the City and LADWP, the Project would incorporate water conservation features to reduce water use. Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2016 CALGreen, 2017 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code and reflects approximately a 20 percent reduction in water usage as compared to the base demand. Project-related GHG emissions from water related sources, provided in Table IV.C-10 on page IV.C-78 also includes implementation of WAT-PDF-1 provided in Section IV.I.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft EIR.</p>

Table IV.C-8 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of LA Green Plan

Action		Description	Consistency Analysis
		groundwater basin. <ul style="list-style-type: none"> Expanding groundwater storage. 	
W2	Reduce per capita water consumption by 20%.	[See W1, above.]	[See W1, above.]
Focus Area: Transportation			
T8	Promote walking and biking to work, within neighborhoods, and to large events and venues.	Promoting alternate modes of travel will reduce the carbon emissions associated with single occupancy vehicles (SOVs). As described in Action Items LU1 and LU2, the City is promoting high-density and mixed-use housing close to major transportation arteries. Such developments will also support the advancement of Action Item T8, by improving accessibility for those who wish to walk and bike to work.	Consistent. While this action primarily applies to the City, the Project would promote a pedestrian-friendly community by placing residential and commercial retail and restaurant uses within walking distance to other residential and commercial retail and restaurant uses. The Project Site is also located in an HQTAs as designated by the 2016 RTP/SCS. The Project would also provide bicycle parking spaces in accordance with LAMC requirements for Project residents, visitors, and employees.
Focus Area: Land Use			
LU1	Promote high-density housing close to major transportation arteries.	With 469 square miles, Los Angeles is a vast and sprawling city. Yet many neighborhoods are walkable, with stores and services clustered near dense residential housing. As the city continues to redevelop and grow, there is an unprecedented opportunity to rethink the urban environment. Accommodating continued growth requires taking advantage of infill opportunities and increasing density along transit corridors.	Consistent. The Project represents a mixed-use infill development that would provide up to 276 residential units, 13 (5 percent of the Project Site's base density) of which would be restricted to Very Low Income households, approximately 24,000 square feet of neighborhood-serving commercial retail and restaurant uses within an HQTAs. Alternately, a 27,000 square foot grocery store would be developed instead of the retail and restaurant uses. The Project Site is located approximately 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT DASH lines. The Project would provide bicycle storage areas for Project residents, employees, and guests. Furthermore, the Project is located within direct access to the US-101 freeway.

Table IV.C-8 (Continued)
Consistency with Applicable GHG Emissions Goals and Actions of LA Green Plan

Action		Description	Consistency Analysis
LU2	Promote and implement transit-oriented development (TOD).	Transit Oriented Districts (TODs) represent opportunities for creating cohesive, vibrant, walkable communities where fragmented, auto-dependent corridors now exist. TODs are a positive alternative to low-density traditional land use patterns that typically segregate housing, jobs and neighborhood services from one another. In contrast, TODs cluster these community elements in close proximity, so a greater portion of trips can be made by transit, bike, or on foot.	Consistent. While this action primarily applies to the City, the Project would concentrate new residential and commercial retail and restaurant uses in close proximity to public transit opportunities (e.g., light rail and bus routes). The Project Site is well served by public transit, including both bus and rail service. The Project Site is located approximately 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT DASH lines.
Focus Area: Waste			
WsT1	Reduce or recycle 70 percent of trash by 2015.	Source reduction and recycling programs not only conserve natural resources and landfill space, but also confer climate benefits.	Consistent. While this action primarily applies to the City, the Project would provide adequate storage areas in accordance with the City of Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that developments include a recycling area of specified size on the Project Site. In addition, the Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material.
<hr/> <p><i>Source: Eyestone Environmental, 2019.</i></p>			

GHG-PDF-1 would require reduction of energy usage by 10 percent over baseline conditions.

In order to meet reduction goals in the LA Green Plan/ClimateLA, LADWP will continue to implement programs to emphasize water conservation and will pursue securing alternative supplies, including recycled water and storm water capture. With regard to solid waste, the City implemented the RENEW LA plan to meet solid waste reduction goals by expanding recycling to multifamily dwellings, commercial establishments, and restaurants. The Project would be indirectly affected by these actions and would further reduce water and solid waste generation, thereby meeting the goals of the LA Green Plan/ClimateLA. In addition, LADWP is required to procure a minimum of 30 percent of its energy portfolio

from renewable sources by 2020, and would continue to implement programs consistent with the LA Green Plan.

Overall, the Project would not conflict with the LA Green Plan/ClimateLA, which is intended to reduce GHG emissions. As such, impacts related to consistency with the LA Green Plan/ClimateLA would be less than significant.

(iv) City of Los Angeles Sustainable City pLAN

As discussed above, the Sustainable City pLAN includes both short-term and long-term aspirations through the year 2035 in various topic areas, including: water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others. The Sustainable City pLAN provides information as to what the City will do with buildings and infrastructure in their control. Although the Sustainable City pLAN mainly targets GHG emissions related to City owned buildings and operations, certain reductions would also benefit the Project. Such measures include increasing renewable energy usage; reduction of per capita water usage; promotion of walking and biking to work, large events and venues; promotion of high density housing close to major transportation stops; and various recycling and trash diversion goals.

The Project would generally comply with these aspirations as the Project is an infill development consisting of residential and commercial retail and restaurant uses on a Project Site located 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT DASH lines. Furthermore, the Project would comply with CALGreen, implement various project design features to reduce energy usage, including GHG-PDF-1 and WAT-PDF-1, and would comply with the City of Los Angeles Solid Waste Management Policy Plan, the RENEW LA Plan, and the Exclusive Franchise System Ordinance (Ordinance No. 182,986) in furtherance of the aspirations included in the Sustainable City pLAN with regard to energy-efficient buildings and waste and landfills. The Project would also provide secure short- and long-term bicycle storage areas for Project residents and guests. **Therefore, the Project would be consistent with the Sustainable City pLAN.**

(v) 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.¹¹² Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050.

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

Further, the Project's consistency with SCAG's RTP/SCS demonstrates that the Project will be consistent with post-2020 GHG reduction goals. The 2016 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 from passenger vehicles by 2035, and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040. In March 2018, CARB adopted updated targets requiring a 19-percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

The Project is the type of land use development that is encouraged by the RTP/SCS to reduce VMT and expand multi-modal transportation options. As shown in Table IV.C-7 on page IV.C-66, the 10.4 Total Project VMT per capita is below SCAG's region daily average of 20.5 Total VMT per capita for the 2040 Plan Year and Los Angeles County's daily average of 18.4 VMT per capita for the 2040 Plan Year. In addition, the Project results in a VMT reduction of approximately 71 percent and a 66-percent reduction in

¹¹² *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.*

GHG emissions from mobile sources in comparison to a Project without Reduction Features, and would be consistent with the reduction in transportation emission per capita provided in the 2016 RTP/SCS. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets beyond 2020.

The emissions modeling in the 2017 Update has projected 2030 statewide emissions which take into account known commitments (reduction measures) such as SB 375, SB 350, and other measures shown in Table IV.C-6 on page IV.C-56. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Update, additional measures to achieve the 2030 targets and beyond are outside of the City or the Project's control. Therefore, any evaluation of post-2030 Project emission would be speculative.

(vi) Conclusion

Because the Project's location, land use characteristics and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations, as well as the City's Green Building Code, the LA Green Plan/Climate LA, and the Sustainable City pLAN, the Project would not conflict with any applicable plan, policy, regulation or recommendation to reduce GHG emissions and its impacts would be less than significant.

(b) Project Emissions

As discussed above, CEQA Guidelines Section 15064.4 recommends quantification of a Project's GHG emissions. However, in the absence of an adopted numerical threshold, the quantification is being done for informational purposes only. The Project would result in direct and indirect GHG emissions generated by different types of emissions sources, including:

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

- Mobile source: emissions associated with vehicles accessing the Project Site;
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

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

(i) Construction

As described in Section II, Project Description, of this Draft EIR, the Project is anticipated to be constructed in multiple phases over a period of approximately 30 months, with buildout of the Project completed in 2023. Construction assumptions used in the analysis of GHG emissions conservatively assume that the Project would be constructed in the shortest duration possible with the most intensive activities occurring on a daily basis. The estimated depths of excavation expected for the subterranean parking and building foundations would be up to approximately 50 feet below grade. It is estimated that approximately 89,000 cubic yards of soil export would be hauled from the Project Site during the excavation phase. The emission of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction is presented in Table IV.C-9 on page IV.C-77.

As presented in Table IV.C-9, construction of the Project is estimated to generate a total of 2,998 MTCO_{2e}. As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.¹¹³ This results in annual Project construction emissions of 100 MTCO_{2e}. A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Appendix B of this Draft EIR.

¹¹³ SCAQMD Governing Board Agenda Item 31, December 5, 2008.

**Table IV.C-9
Construction-Related Emissions
(MTCO_{2e})**

Year	MTCO _{2e} ^a
Year 1	41
Year 2	1,927
Year 3	614
Year 4	416
Total	2,998
Amortized Over 30 Years	100
<p>^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.</p> <p>Source: Eyestone Environmental, 2019.</p>	

(ii) *Operation*

Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. The Project Site would include two outdoor fireplaces, which would also contribute to area source emissions. However, as discussed above (see GHG-PDF-2), the proposed residential uses would not include indoor fireplaces. As shown in Table IV.C-10 on page IV.C-78, the Project, at full buildout, is expected to result in a total of 6 MTCO_{2e} per year from area sources, which reflects a 91 percent reduction in area source emissions with implementation of GHG-PDF-2. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

Electricity and Natural Gas Generation Emissions

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

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable

Table IV.C-10
Annual GHG Emissions Summary (Buildout)^a
(metric tons of carbon dioxide equivalent [MTCO_{2e}])

Scope	Project Without Reduction Features	Project	Reduction^b
Area ^c	69	6	91%
Energy ^d	827	760	8%
Mobile ^e	3,110	1,069	66%
Stationary ^f	3	3	0%
Solid Waste ^g	64	64	0% ^h
Water/Wastewater ⁱ	87	47	46%
Construction	100	100	0%
Total Emissions	4,260	2,049	52%

^a CO_{2e} was calculated using CalEEMod and the results are provided in Appendix B of this Draft EIR. Emissions represent a net increase (Project minus Existing)

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

^c Area source emissions are from landscape equipment and two outdoor natural gas fireplaces.

^d Energy source emissions are based on CalEEMod default electricity and natural gas usage rates. Emissions from electricity generation only take into account carbon intensity at build out year, but does not take into account decreasing carbon intensity required by SB 350 (RPS). However, it is recognized that the RPS would require utilities to supply 50 percent renewable energy by 2030.

^e Mobile source emissions do not account for increasing fuel economy standards for future years or proposed LCFS standards.

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

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

^h Assumes that the Project without Reduction Features would be consistent with the City of LA's Waste Diversion Rate. The waste diversion rate is currently required by AB 341 and is not considered a Reduction Feature.

ⁱ Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates.

Source: Eyestone Environmental, 2019.

emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections for years 2015 and 2026. As LADWP projections are not calculated for every year, straight

line interpolation was performed to estimate the LADWP carbon intensity factor for the Project buildout year based on Year 2015 and 2026 data.¹¹⁴ Straight line interpolation was performed to estimate the LADWP carbon intensity factor for the Project buildout year. LADWP's carbon intensity projections also take into account SB 350 RPS requirements for renewable energy.

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

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and California Residential Appliance Saturation Survey (RASS) studies.¹¹⁵ The data are specific for climate zones; therefore, Zone 11 was selected for the Project Site based on the zip code tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under 2016 Title 24 building codes.

The Project would implement a number of project design features that would reduce Project energy consumption. Specifically, GHG-PDF-1, which would require the Project to incorporate features as to be capable of meeting the standards of LEED® certification, would reduce overall energy usage. In addition, GHG-PDF-2 would forbid the use of natural gas fireplaces within residential units throughout the Project Site, which would reduce GHG emissions resulting from natural gas combustion.

As shown in Table IV.C-10 on page IV.C-78, Project GHG emissions from electricity and natural gas usage would result in a total of 760 MTCO₂e per year and accounts for an eight percent reduction in energy source emissions with implementation of GHG-PDF-1 and GHG-PDF-2. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

¹¹⁴ LADWP, *2016 Power Integrated Resource Plan*.

¹¹⁵ CEC, *Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010*.

Mobile Source Emissions

Mobile source operational GHG emissions were calculated using CalEEMod based on the Project trip-generation estimates provided by Gibson Transportation Consulting, Inc.¹¹⁶ As discussed in Section IV.G, Transportation, of this Draft EIR, to calculate peak hour trip estimates, the number of residential units and amount of building area for the commercial retail and restaurant uses were multiplied by the applicable trip-generation rates based on the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition*.¹¹⁷

The Project design also includes characteristics that would reduce trips and VMT as compared to a project without VMT reducing measures within the South Coast Air Basin (Air Basin) as measured by the air quality model (CalEEMod). The Project represents an infill development within an existing urbanized area that would concentrate new residential and commercial retail and restaurant uses within an HQTAs. The Project Site is located approximately 0.28 mile from the Metro Red Line Hollywood/Vine Station. In addition, the Project Site is served by one Metro Rapid line, seven Metro Local lines, and three LADOT Downtown Area Shuttle (DASH) lines. The Project would locate residential uses in proximity to a job center which would reduce the distance required for travel from home to work.

As shown in Table IV.C-10 on page IV.C-78, Project GHG emissions from mobile sources would result in a total of 1,069 MTCO_{2e} per year, which accounts for a 66 percent reduction in mobile source emissions with implementation of VMT reducing measures as compared to the Project without implementation of VMT reducing measures. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency generator on-site. As shown in Table IV.C-10, the Project scenario is expected to result in a total of 3 MTCO_{2e} per year from stationary sources.

¹¹⁶ *Gibson Transportation Consulting Inc., Transportation Impact Study for the Modera Argyle Project, Hollywood, California, March 2018.*

¹¹⁷ *As discussed above, while the Project includes an option for grocery store uses, for purposes of this analysis, the Project's proposed retail and restaurant option was analyzed instead, as it is the more conservative option due to greater number of mobile trips.*

Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. As shown in Table IV.C-10 on page IV.C-78, Project GHG emissions from solid waste generation would result in a total of 64 MTCO_{2e} per year which accounts for a 50 percent reduction in solid waste generation emissions due to the City's current recycling/diversion rate of 50 percent.¹¹⁸

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water; these include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused 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 factor¹¹⁹ to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2016 CALGreen, 2017 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code, and reflect an approximately 20 percent reduction as compared to the base demand.

As shown in Table IV.C-10, Project GHG emissions from water/wastewater usage would result in a total of 47 MTCO_{2e} per year, which takes into account a 20-percent reduction in water/wastewater emissions with implementation of WAT-PDF-1 provided in Section IV.I.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Draft

¹¹⁸ *The City's current diversion rate is 76 percent. Therefore, the analysis herein is conservative as a 50-percent diversion rate was applied.*

¹¹⁹ *The intensity factor reflects the average pounds of CO_{2e} per megawatt generated by a utility company.*

EIR as compared to the Project without project design features. Please refer to Appendix B of this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(b) Combined Construction and Operational Impacts

As shown in Table IV.C-10 on page IV.C-78, when taking into consideration implementation of project design features provided throughout this Draft EIR, including the requirements set forth in the City of Los Angeles Green Building Code and the full implementation of current state mandates, the GHG emissions for the Project in 2023 would equal 100 MTCO_{2e} per year (amortized over 30 years) during construction and 1,949 MTCO_{2e} per year during operation of the Project with a combined total of 2,049 MTCO_{2e} per year.

(c) Conclusion

In summary, the Project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. More specifically, the regulatory compliance analysis provided above demonstrates that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in the 2008 Climate Change Scoping Plan and subsequent updates, the 2016 RTP/SCS, the LA Green Plan/ClimateLA and the Sustainable City pLAN, as well as with the City's Green Building Code. As also shown above, consistency with these plans would reduce the Project's incremental contribution of GHG emissions. **Accordingly, the Project would not conflict with any applicable plan, policy, regulation, or recommendation adopted for the purpose of reducing GHG emissions. Therefore, impacts with regard to climate change would be less than significant.**

4. Cumulative Impacts

As explained above, the analysis of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem. Accordingly, the analysis above took into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.C-10 illustrates that implementation of the Project's regulatory requirements and project design features, including state mandates, would contribute to GHG reductions. These reductions support state goals for GHG emissions reduction.

As demonstrated above, the Project is consistent with CARB's 2008 Climate Change Scoping Plan and subsequent updates, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while

achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The analysis also shows that the Project is consistent with the 2016 RTP/SCS' regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. In addition, the Project is also consistent with the LA Green Plan/ClimateLA, which emphasizes improving energy conservation and energy efficiency, increasing renewable energy generation, and changing transportation and land use patterns to reduce auto dependence. Furthermore, the Project would generally comply with the aspirations of the Sustainable City pLAn, which includes specific targets related to housing and development, and mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. **Based on the above, Project contributions to global climate change would not be cumulatively considerable, and cumulative impacts associated with GHG emissions would be less than significant.**

5. Mitigation Measures

As discussed above, the Project would result in less-than-significant impacts related to GHG emissions. The Project would comply with applicable LA Green Building Code, LA Green Plan/ClimateLA, and other applicable regulatory requirements as set forth throughout this Draft EIR and specific project design features to further support and promote environmental sustainability. No mitigation measures are required.

6. Level of Significance After Mitigation

Project and cumulative impacts related to GHG emissions would be less than significant.