

# IV. Environmental Impact Analysis

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## C. Greenhouse Gas Emissions

### 1. Introduction

This section provides a discussion of global climate change, existing regulations pertaining to global climate change, an inventory of the approximate greenhouse gas (GHG) emissions that would result from the construction and operational activities associated with the Proposed Project, and an analysis of the significance of the impact of these GHGs. This section also identifies mandatory and voluntary energy and resource conservation measures that have been incorporated into the Proposed Project to reduce GHG emissions and associated impacts. This analysis also evaluates the consistency of the Project with the applicable policies that have been adopted to reduce statewide GHG emissions. Calculation worksheets, assumptions, and model outputs used in the analysis are included in Appendix E of this Draft EIR.

#### a) General Terms and Scientific Literature

Earth's natural warming process is known as the "greenhouse effect." This greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into Earth's atmosphere, but prevents radiated heat from escaping, thus warming Earth's atmosphere. GHGs keep the average surface temperature of the Earth to approximately 60 degrees Fahrenheit (°F). However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.<sup>1</sup>

It is normal for the earth's temperature to fluctuate over extended periods of time. Over the past one hundred years, the Earth's average global temperature has generally increased by 1° F. In some regions of the world, the increase has been as much as 4° F. Scientists studying the particularly rapid rise in global temperatures during the late twentieth century believe that natural variability alone does not account for that rise.

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<sup>1</sup> *Intergovernmental Panel on Climate Change, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)].*

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 (during motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste.<sup>2</sup>

Scientists refer to the global warming context of the past century as the “enhanced greenhouse effect” to distinguish it from the natural greenhouse effect.<sup>3</sup> While the increase in temperature is known as “global warming,” the resulting change in weather patterns is known as “global climate change” and leads to adverse environmental impacts in a wide variety of areas and public health hazards. Global climate change is evidenced in changes to global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, changes in wind patterns, increased risk of wildfires, extreme weather events, and ocean acidification.<sup>4</sup>

The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. Many of the recent concerns over global climate changes use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) developed several emission projections of GHGs needed to stabilize global temperatures and climate change impacts. The IPCC predicted that the range of global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 to 6.4 degrees Celsius (°C).<sup>5</sup> Regardless of analytical methodology, global average temperature and mean sea level are expected to rise under all scenarios.

Climate models applied to California's conditions project that, under different scenarios, temperatures in California are expected to increase by 3 to 10.5° F.<sup>6</sup> Almost all climate scenarios include a continuing trend of warming through the end of the century given the

<sup>2</sup> *Pew Center on Global Climate Change and the Pew Center on the States, Climate Change 101: Understanding and Responding to Global Climate Change, October 2006.*

<sup>3</sup> *Ibid.*

<sup>4</sup> *Intergovernmental Panel on Climate Change, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]*

<sup>5</sup> *Intergovernmental Panel on Climate Change, Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*

<sup>6</sup> *California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2006.*

substantial amounts of GHGs already released, and the difficulties associated with reducing emissions to a level that would stabilize the climate.

## **b) GHG Components**

Constituent gases of the Earth's atmosphere, called atmospheric GHG, play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent GHGs contributing to this process include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF<sub>3</sub>) and sulfur hexafluoride (SF<sub>6</sub>).<sup>7</sup> A general description of each GHG discussed in this section is provided in Table IV.C-1, Description of Identified Greenhouse Gases, below. CO<sub>2</sub> is the most abundant GHG present within the atmosphere. Other GHGs present within the atmosphere are less abundant, but have higher global warming potential than CO<sub>2</sub>. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO<sub>2</sub>, denoted as CO<sub>2</sub>e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking food are the primary sources of GHG emissions.

## **c) Global Warming Potential**

Global Warming Potential (GWP) is one type of simplified index based upon radiative properties that is used to estimate the potential future impacts of emissions of different gases upon the climate system in a relative sense. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO<sub>2</sub>, as well as the decay of each gas over a specified time period (the amount removed from the atmosphere over a given number of years) relative to that of CO<sub>2</sub>. For reference, a summary of the atmospheric lifetime and GWP of selected gases is presented in Table IV.C-2, Atmospheric Lifetimes and Global Warming Potentials. As indicated, GWP ranges from 1 (CO<sub>2</sub>) to 22,800 (SF<sub>6</sub>).

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<sup>7</sup> As defined by California Assembly Bill (AB) 32 (2006) and Senate Bill (SB)104 (2009).

**Table IV.C-1  
Description of Identified Greenhouse Gases**

Greenhouse Gas	General Description
CO <sub>2</sub>	The natural production and absorption of CO <sub>2</sub> is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, each of these activities has increased in scale and distribution. CO <sub>2</sub> was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20 <sup>th</sup> century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). <sup>8</sup> Emissions of CO <sub>2</sub> from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010. Globally, economic and population growth continued to be the most important drivers of increases in CO <sub>2</sub> emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply.
CH <sub>4</sub>	CH <sub>4</sub> 's lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO <sub>2</sub> , N <sub>2</sub> O, and Chlorofluorocarbons (CFCs)). CH <sub>4</sub> , which has a lower atmospheric concentration than CO <sub>2</sub> , has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.
N <sub>2</sub> O	Concentrations of N <sub>2</sub> O also began to rise at the beginning of the industrial revolution. N <sub>2</sub> 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 also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).
CFCs	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C <sub>2</sub> H <sub>6</sub> ) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that CFCs are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

<sup>8</sup> *The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014).*

<b>HFCs</b>	HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 ( $\text{CHF}_3$ ), HFC-134a ( $\text{CF}_3\text{CH}_2\text{F}$ ), and HFC-152a ( $\text{CH}_3\text{CHF}_2$ ). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. HFCs are manmade for applications such as automobile air conditioners and refrigerants.
<b>PFCs</b>	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above the Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane ( $\text{CF}_4$ ) and hexafluoroethane ( $\text{C}_2\text{F}_6$ ). The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.
<b>SF<sub>6</sub></b>	Sulfur hexafluoride ( $\text{SF}_6$ ) is an inorganic, odorless, colorless, non-toxic, and nonflammable gas. $\text{SF}_6$ has the highest global warming potential of any gas evaluated; 23,900 times that of $\text{CO}_2$ . $\text{SF}_6$ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.
<b>NF<sub>3</sub></b>	$\text{NF}_3$ is an inorganic colorless, nonflammable gas with a slightly musty odor, and is increasingly being used as an etchant in microelectronics. $\text{NF}_3$ has a global warming potential 17,200 times greater than that of $\text{CO}_2$ when compared over a 100-year period.
<i>Source: Association of Environment Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007.</i>	

**Table IV.C-2  
Atmospheric Lifetimes and Global Warming Potentials<sup>9</sup>**

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
CO <sub>2</sub>	50 – 200 <sup>[a]</sup>	1
CH <sub>4</sub>	12 (+/-3)	28-36
N <sub>2</sub> O	114	298
NF <sub>3</sub>	740	16,100
HFC-23	264	14,800
HFC-134a	14.6	1,430
HFC-152a	1.5	124
PFC-14: Tetrafluoromethane (CF <sub>4</sub> )	50,000	7,390
PFC-116: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10,000	12,200
Sulfur Hexafluorides (SF <sub>6</sub> )	3,200	22,800

<sup>[a]</sup> CO<sub>2</sub>'s lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean-atmosphere-land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Source: <http://www3.epa.gov/climatechange/ghgemissions/gases.html>.

Source: IPCC, 2007

**d) Projected Impacts of Climate Change in California**

The scientific community’s understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth’s climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC’s *Fifth Assessment Report, Summary for Policy Makers* states that, “it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other

<sup>9</sup> GWP and associated CO<sub>2</sub>e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its *Second Assessment Report (SAR)* in 1996. Historically, GHG emission inventories have been calculated using the GWP from the IPCC’s SAR. The IPCC updated the GWP values based on the latest science in its *Fourth Assessment Report (AR4)*. CARB reports GHG emission inventories for California using the GWP values from the IPCC AR4. Therefore, the analysis herein reflects the GWP values from IPCC AR4. Although the IPCC has released AR5 with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards.

anthropogenic forc[es [sic] together.”<sup>10</sup> A report from the National Academy of Sciences concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.<sup>11</sup>

According to the California Air Resources Board (CARB), the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year, more high ozone days; more large forest fires; more drought years; increased erosion of California’s coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.<sup>12</sup> Below is a summary of some of the potential effects that could be experienced in California as a result of global warming and climate change.

### (1) Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect and, therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would exacerbate air quality. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.<sup>13</sup> However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus reducing the pollution associated with wildfires.

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy* as a response to the Governor’s Executive Order S-13-2008.<sup>14</sup> The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was

<sup>10</sup> Intergovernmental Panel on Climate Change, *Fifth Assessment Report, Summary for Policy Makers*, page 5, 2013, <http://ipcc.ch/report/ar5/syr/>.

<sup>11</sup> Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, *Expert Credibility in Climate Change*, *Proceedings of the National Academy of Sciences of the United States of America*. 2010;107:12107-12109.

<sup>12</sup> California Environmental Protection Agency, *Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature*, 2006, [http://climatechange.ca.gov/climate\\_action\\_team/reports/2006report/2006-04-03\\_FINAL\\_CAT\\_REPORT.PDF](http://climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF).

<sup>13</sup> California Environmental Protection Agency, *Preparing California for Extreme Heat: Guidance and Recommendations*, October 2013, <https://toolkit.climate.gov/reports/preparing-california-extreme-heat-guidance-and-recommendations>.

<sup>14</sup> California Natural Resources Agency, *Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008*, 2009.

directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision-makers.<sup>15</sup> The website, known as Cal-Adapt, became operational in 2011.<sup>16</sup> The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values (i.e., temperature, sea-level rise, snowpack) from a variety of scenarios and models and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors. According to the Cal-Adapt website, the portion of the City in which the Project Site is located could result in an annual average maximum temperature of approximately 81.8°F by 2070–2099, compared to the historical annual mean of 76.2°F during the baseline 1961–1990 period.

## (2) Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, “[c]onsiderable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change.”<sup>17</sup> For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation.<sup>18</sup> Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.<sup>19</sup>

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that “climate change will likely have a significant effect on California’s future water resources...[and] future water demand.” It also reports that “much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes are uncertain.”<sup>20</sup> It also reports that the

<sup>15</sup> California Natural Resources Agency, *Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.*

<sup>16</sup> The Cal-Adapt website address is: <http://cal-adapt.org>.

<sup>17</sup> Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, page 5.*

<sup>18</sup> Pacific Institute for Studies in Development, Environment and Security, *Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003.*

<sup>19</sup> California Natural Resources Agency, *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy, 2014.*

<sup>20</sup> California Department of Water Resources *Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California’s Water Resources, July 2006, page 2-54.*

relationship between climate change and its potential effect on water demand is not well understood, but “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future.” Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.<sup>21</sup> In its *Fifth Assessment Report*, the IPCC states “[c]hanges in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions.”<sup>22</sup>

### (3) Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California’s water supply. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

### (4) Agriculture

California has a \$30 billion agricultural industry that produces half the country’s fruit and vegetables. Higher CO<sub>2</sub> levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.<sup>23</sup>

### (5) Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2 to 11.5°F (1.1 to 6.4°C) by 2100, with significant regional variation.<sup>24</sup> Soil moisture is likely to decline in many regions, and

<sup>21</sup> *California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California’s Water Resources, July 2006, page 2-75.*

<sup>22</sup> *Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, 2013, page 20.*

<sup>23</sup> *California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2006.*

<sup>24</sup> *National Research Council, Advancing the Science of Climate Change, 2010.*

intense rainstorms are likely to become more frequent. Sea level could rise as much as 2 feet along most of the United States coastline. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.<sup>25</sup>

## 2. Environmental Setting

### a) Regulatory Framework

In response to growing scientific and political concern about global climate change, federal, state, and local governmental entities have adopted a series of laws to reduce emissions of GHGs to the atmosphere. The following includes a discussion of the applicable regulations associated with GHG emissions in the context of land use planning and development.

#### (1) Federal

The United States Environmental Protection Agency (U.S. EPA) is responsible for implementing federal policy to address GHGs.

##### (a) *Federal Clean Air Act*

In the past, the U.S. EPA has not regulated GHGs because it asserted that the Clean Air Act (CAA) did not authorize it to issue mandatory regulations to address global climate change. (See Section IV.A, Air Quality for a detailed discussion of the CAA.) However, in 2007 the U.S. Supreme Court held that the U.S. EPA must consider regulation of motor-vehicle GHG emissions.<sup>26</sup> The Court did not mandate that the U.S. EPA enact regulations to reduce GHG emissions but found that the only instances in which the U.S. EPA could avoid taking action were 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. In December 2009, the U.S. EPA issued an endangerment finding for GHGs under the CAA, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution.<sup>27</sup> This is the first step in regulating GHGs under the provisions of the CAA. These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under

<sup>25</sup> *Parmesan, C., and H. Galbraith, Observed Impacts of Global Climate Change in the U.S., Prepared for the Pew Center on Global Climate Change, November 2004.*

<sup>26</sup> *Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007))*

<sup>27</sup> *United States Environmental Protection Agency, Endangerment, and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, website: <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>, accessed February 2020.*

the Federal Clean Air Act. The EPA's endangerment finding paves the way for Federal regulation of GHGs.

Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the U.S. EPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 metric tons (MT) or more a year of GHGs.

(b) *Executive Order 13432*

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the President signed Executive Order 13432 on May 14, 2007, directing the U.S. EPA, along with the Departments of Transportation, and Energy to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation.

(c) *Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards.*

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)<sup>28</sup> and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO<sub>2</sub> per mile by model year 2016, based on U.S. EPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO<sub>2</sub> per mile. According to the U.S. EPA, a model year 2025 vehicle would emit one-half of the GHG

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<sup>28</sup> *The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S. Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.*

emissions from a model year 2010 vehicle.<sup>29</sup> In 2017, the U.S. EPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

In March 2020, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) adopted the Safer Affordable Fuel-Efficient Vehicles Rule that maintains the CAFE and CO<sub>2</sub> standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO<sub>2</sub> standards for model year 2020 are 43.7 mpg and 204 grams of CO<sub>2</sub> per mile for passenger cars and 31.3 mpg and 284 grams of CO<sub>2</sub> per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. The final Safer Affordable Fuel-Efficient Vehicles Rule also excludes CO<sub>2</sub>e emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.<sup>30</sup>

**(d) Heavy-Duty Engines and Vehicles Fuel Efficiency Standards**

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the U.S. EPA and the NHTSA announced Phase I fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles from model years 2014 through 2018.<sup>31</sup> The U.S. EPA and the NHTSA adopted standards for CO<sub>2</sub> emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: (1) combination tractors, (2) heavy-duty pickup trucks and vans, and (3) vocational vehicles. According to the U.S. EPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent.

Building on the Phase I standards, in August 2016, U.S. EPA and NHTSA jointly finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change. The final standards are expected to lower CO<sub>2</sub> emissions by approximately 1.1 billion metric tons; save vehicle owners fuel costs of about \$170 billion; and reduce oil

<sup>29</sup> *United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012.*

<sup>30</sup> *National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), Federal Register/ Vol. 85, No. 84 / Thursday, April 30, 2020 / Rules and Regulations, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, website: <https://www.govinfo.gov/content/pkg/FR-2018-08-24/pdf/2018-16820.pdf>, accessed March 2020.*

<sup>31</sup> *United States Environmental Protection Agency, Office of Transportation and Air Quality. EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium-and Heavy-Duty Vehicles, August 2011.*

consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.<sup>32</sup>

(e) *Energy Independence and Security Act*

In December 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. The purpose of the EISA is “to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy GHG capture and storage options, and to improve the energy performance of the Federal Government, and other purposes.”<sup>33</sup> The EISA provided regulations on fuel economy standards for passenger cars and medium-duty and heavy-duty commercial vehicles, renewable fuel standards, appliances and lighting energy efficiency, and building energy efficiency, among others, including:

- 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.

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<sup>32</sup> *Regulations for Greenhouse Gas Emission from Commercial Trucks & Buses, November 16, 2016, website: [https://19january2017snapshot.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks\\_.html](https://19january2017snapshot.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks_.html).*

<sup>33</sup> *Energy Independence and Security Act of 2007 (42 U.S.C ch. 152 § 17001 et. seq.), December 19, 2007.*

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## (2) State

### (a) *Executive Order S-3-05*

Executive Order S-3-05, issued in June 2005, established GHG emissions targets for the State of California, as well as a process to ensure the targets are met. The order directed the Secretary for California's Environmental Protection Agency (CalEPA) to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team, led by the Secretary of CalEPA, was formed. The California Climate Action Team is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. The California Climate Action Team reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.<sup>34</sup> The statewide GHG targets are as follows:

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

With the adoption of the California Global Warming Solutions Act of 2006 (also known as AB 32) and SB 32, both discussed below, the Legislature adopted an equivalent statewide 2020 target and a 2030 statewide target, respectively. However, the Legislature has not yet adopted a 2050 horizon-year target.

The California Climate Action Team stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.<sup>35</sup>

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<sup>34</sup> *California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

<sup>35</sup> *California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, page 58.*

*(b) California Global Warming Solutions Act (AB 32)*

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.<sup>36</sup>

AB 32 is codified in the California Health & Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006, which defines GHGs as CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>. AB 32 represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance.

The heart of AB 32 is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. To achieve these goals, which are consistent with the California Climate Action Team (CAT) GHG targets for 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.<sup>37</sup>

*(c) 2008 Climate Change Scoping Plan*

A specific requirement of AB 32 was for CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020.<sup>38</sup> Climate Change Scoping Plan measures include direct emission reductions, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and non-monetary incentives for sources of categories. CARB approved the Climate Change Scoping Plan in 2008 (hereinafter referred to as the “original Scoping

<sup>36</sup> *Legislative Counsel of California, California Assembly Bill 32, September 2006.*

<sup>37</sup> *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. Several early action measures were adopted and became effective on January 1, 2010.*

<sup>38</sup> *California Air Resources Board, Climate Change Scoping Plan, December 2008.*

Plan”) and approved updates to the original Scoping Plan in 2014 and 2017 (hereinafter referred to as the 2014 Scoping Plan and the 2017 Scoping Plan, respectively).

The original Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions for various categories of emissions. The original Scoping Plan called for a “coordinated set of solutions” to address all major categories of GHG emissions. The original Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and California CAT early actions and additional GHG reduction measures by both entities, and identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the LCFS, and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard. Additionally, the original Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through “improving energy efficiency by 25 percent.”<sup>39</sup>

Key elements of the Scoping Plan include the following:<sup>40</sup>

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS); and

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<sup>39</sup> *California Air Resources Board, Climate Change Scoping Plan, December 2008.*

<sup>40</sup> *California Air Resources Board, Climate Change Scoping Plan, December 2008.*

- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 million metric tons of CO<sub>2</sub>e (MMTCO<sub>2</sub>e) using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under no-action-taken (NAT) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 MMTCO<sub>2</sub>e (using GWP values from the IPCC SAR). Therefore, under the original projections, the state must reduce its 2020 NAT emissions by 28.5 percent in order to meet the 1990 target of 427 MMTCO<sub>2</sub>e.

(d) *2014 Scoping Plan*

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (2014 Scoping Plan), where it revised the previously adopted 1990 GHG emissions level from 427 MMTCO<sub>2</sub>e to 431 MMTCO<sub>2</sub>e based on the scientifically updated GWP values in the IPCC Fourth Assessment Report.<sup>41</sup> The total emissions expected in the 2020 Business as Usual (BAU) scenario<sup>42</sup> were also updated from the previously adopted estimate of 596 MMTCO<sub>2</sub>e to 509 MMTCO<sub>2</sub>e. The updated 2020 BAU scenario includes reductions anticipated from Pavley I and the Renewable Portfolio Standard (RPS), as discussed in further detail below, which are now adopted into law. The stated purpose of the 2014 Scoping Plan is to highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.<sup>43</sup> The 2014 Scoping Plan 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

<sup>41</sup> *The IPCC is the leading international body for the scientific assessment of climate change established in 1988 under the auspices of the United Nations.*

<sup>42</sup> *As discussed in the Scoping Plan, the Business as Usual (BAU or Reference Scenario) is the scenario of what GHG emissions would look like if no action was taken beyond the existing policies that are required and already in place to achieve the 2020 limit. BAU includes the existing renewables requirements, advanced clean cars, the 10 percent reduction in carbon intensity Low Carbon Fuel Standard, and the SB 375 program for sustainable communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years [since 2012].*

<sup>43</sup> *CARB, First Update, p. 4, May 2014.*

to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals.<sup>44</sup>

In conjunction with the 2014 Scoping Plan, 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.”<sup>45</sup> Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The 2014 Scoping Plan 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.”<sup>46</sup> 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.

On July 11, 2018, CARB announced that GHG pollution in California fell below 1990 levels for the first time since emissions peaked in 2004. Electricity generation had the largest decline among the sectors. Emissions from this sector declined 18 percent in 2016, reflecting continued growth in renewable energy – such as solar, wind and geothermal – as a result of the state’s Renewables Portfolio Standard, and a corresponding drop in natural gas generation. Solar electricity in all forms, including rooftop generation, grew 33 percent, while natural gas fell more than 15 percent.<sup>47</sup>

(e) *Executive Order B-30-15*

On April 29, 2015, California Governor Jerry Brown issued Executive Order B-30-15. Therein, Governor Brown:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;<sup>48</sup>
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets; and

<sup>44</sup> CARB, *First Update*, p. 34, May 2014.

<sup>45</sup> CARB, *First Update*, p. 6, May 2014.

<sup>46</sup> CARB, *First Update*, p. 32, May 2014.

<sup>47</sup> *Climate Pollutants Fall Below 1990 Levels For The First Time*, website: <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time>.

<sup>48</sup> *In response to EO-B-30-15, this target was adopted by the California Senate under SB 32 on September 8, 2015.*

- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMTCO<sub>2e</sub>.

(f) *California Senate Bill 32 and California Assembly Bill 197*

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill Assembly Bill (AB) 197 were signed by Governor Brown. SB 32 and AB 197 amend HSC) Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

Based on the emissions reductions directed by SB 32, the 2030 limit is 260 MMTCO<sub>2e</sub> per year.<sup>49</sup> However, known commitments<sup>50</sup> are expected to result in emissions that are 60 MMTCO<sub>2e</sub> above the target in 2030, and have a cumulative emissions reduction gap of about 236 MMTCO<sub>2e</sub>. This means the known commitments do not decline fast enough to achieve the 2030 target. The remaining 236 MMTCO<sub>2e</sub> of estimated GHG emissions reductions would not be achieved unless further action is taken to reduce GHGs. However, while there is a potential GHG emissions reduction gap of approximately 236 MMTCO<sub>2e</sub>, the Cap-and-Trade Program discussion below notes that the California legislature passed AB 398 to extend the Cap-and-Trade Program from January 1, 2021 through December 31, 2030 in order to achieve the necessary GHG reductions associated with SB 32. While the majority of the reductions would result from the continuation of the Cap-and-Trade regulation, additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan.

(g) *2017 Scoping Plan Update*

In December 2017, CARB adopted “California’s 2017 Climate Change Scoping Plan: The Strategy for Achieving California’s 2030 Greenhouse Gas Target” (2017 Scoping Plan) that describes the actions the State will take to achieve the SB 32 climate goal of reducing GHG emissions at least 40 percent below 1990 levels by 2030. The 2017 Scoping Plan includes input from a range of State agencies and is the result of a two-year development process including extensive public and stakeholder outreach designed to ensure that California’s climate and air quality efforts continue to improve public health and drive

<sup>49</sup> California Air Resources Board, *California’s 2017 Climate Change Scoping Plan, November 2017*, [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf)

<sup>50</sup> “Known commitments” are measures identified in the Scoping Plan(s) that refer to existing programs or are measures otherwise required by statute.

development of a more sustainable economy. It outlines an approach across economic sectors to combine GHG reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. The 2017 Scoping Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197 and includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The 2017 Scoping Plan reflects the direction from the Legislature on the Cap-and-Trade Program, as described in AB 398,<sup>51</sup> the need to extend key existing emissions reductions programs, and acknowledges the parallel actions required under AB 617<sup>52</sup> to strengthen monitoring and reduce air pollution at the community level.

The 2017 Scoping Plan considered the Scoping Plan Scenario and four alternatives for achieving the required GHG reductions but ultimately selected the Scoping Plan Scenario. CARB states that the Scoping Plan Scenario "is the best choice to achieve the State's climate and clean air goals."<sup>53</sup> Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources. Based on the emissions reductions directed by SB 32 (i.e., 40% below 1990 levels), the annual 2030 statewide target emissions level for California is 260 MMTCO<sub>2e</sub>.

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<sup>51</sup> On July 17, 2017, California legislature passed AB 398 to extend the cap-and-trade program from January 1, 2021 through December 31, 2030. AB 398 established the Compliance Offsets Protocol Task Force to provide guidance in approving new offset protocols that increase direct environmental benefits in the State. Moreover, AB 398 continues the gradual reduction in the number of allowances given to industries and reduces carbon offset credits to 4 percent from 2021 through 2025 and 6 percent from 2026 through 2030.

<sup>52</sup> Assembly Bill 617 aims to reduce the burden from pollutants in California's most disadvantaged communities. The primary elements of the bill focus on discrete actions to determine solutions for directly reducing the air pollution impacts on environmental justice communities.

<sup>53</sup> California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf)

The 2017 Scoping Plan encourages local municipalities to update building codes and establish sustainable development practices for accommodating future growth. Key policies that involve the residential and commercial building sectors, that are applicable to the proposed Project include the implementation of SB 375 (promoting infill development and high density housing in high quality transit areas), implementing green building practices (i.e., Cal Green Code), energy efficiency and water conservation policies, and waste diversion efforts.

(h) *California Renewables Portfolio Standard*

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107 and again in 2011 under SBX1-2, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020.<sup>54,55</sup> The 33 percent standard is consistent with the RPS goal established in the Scoping Plan.<sup>56</sup> These mandates apply directly to investor-owned utilities. Based on the investor-owned utilities (IOU) Annual RPS Compliance Filings in August 2017, the three large IOUs surpassed this requirement.<sup>57</sup> In 2018, LADWP achieved the state legislated goal of 32 percent of all energy sources coming from renewable energy.<sup>58</sup>

(i) *California Senate Bill 350*

The Clean Energy and Pollution Reduction Act of 2015, SB 350 (Chapter 547, Statutes of 2015) was approved by Governor Brown on October 7, 2015. SB 350 will: (1) increase 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 December 31, 2030; (2) require the State Energy Resources Conservation and Development Commission to 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 final end uses of retail customers by January 1, 2030; (3) provide for the evolution of the Independent System Operator (ISO) into a regional organization; and (4) require the state to reimburse local agencies and school districts for certain costs mandated by the state through procedures established by statutory provisions. Among other objectives, the

<sup>54</sup> *Legislative Counsel of California, Senate Bill 1078, September 2002.*

<sup>55</sup> *Legislative Counsel of California, Senate Bill 1368, September 2006*

<sup>56</sup> *California Air Resources Board, Climate Change Scoping Plan, December 2008.*

<sup>57</sup> *California Public Utilities Commission, 2017 Annual Report: Renewable Portfolio Standard, November 2017 (at Table 1).*

<sup>58</sup> *California Energy Commission, Utility Annual Content Labels for Los Angeles Department of Water and Power, 2018.*

Legislature intends to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. In other words, SB 350 essentially requires the energy efficiency of existing buildings to be doubled by 2030.

*(j) California Senate Bill 100*

On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased California's Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

*(k) California Senate Bill 1368*

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the California Energy Commission (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 CO<sub>2</sub> per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO<sub>2</sub> per megawatt-hour (see CEC Order No. 07-523-7).

*(l) Sustainable Communities and Climate Protection Act (SB 375)*

California's Sustainable Communities and Climate Protection Act, also referred to as Senate Bill 375 (SB 375) became effective January 1, 2009. The goal of SB 375 is to help achieve AB 32's GHG emissions reduction goals by aligning the planning processes for regional transportation, housing, and land use.

SB 375 requires CARB to develop regional reduction targets for GHGs, and prompts the creation of regional plans to reduce emissions from vehicle use throughout the state. California's 18 Metropolitan Planning Organizations (MPOs) have been tasked with creating "Sustainable Community Strategies" (SCS) in an effort to reduce the region's (VMT) in order to help meet AB 32 targets through integrated transportation, land use,

housing and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the State's 18 MPOs. For the SCAG region, the targets are set at eight percent below 2005 per capita emissions levels by 2020 and 13 percent below 2005 per capita emissions levels by 2035. Beginning October 1, 2018, the target changed to 19 percent for 2035. This new target has been incorporated into SCAG's 2020-2045 Regional Transportation Plan / Sustainable Communities Plan (2020-2045 RTP/SCS, also referred to as the "Connect SoCal" Plan).<sup>59</sup>

*(m) SB 97 & CEQA Guidelines*

In August 2007, the Legislature adopted SB 97, which added Public Resources Code Section 21083.05 requiring the Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the California Natural Resources Agency. OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009; and the CEQA Guidelines amendments were adopted on December 30, 2009 and became effective on March 18, 2010, thereby creating a new resource section for GHG emissions and indicating criteria that may be used to establish significance of GHG emissions.

The CEQA Guidelines amendments do not specify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but rely on the lead agencies in making their own significance determinations based upon substantial evidence. The CEQA Guidelines amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The CEQA 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 CEQA Guidelines amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; and/or (2) rely on a qualitative analysis or performance-based standards. Further, the CEQA 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

<sup>59</sup> SCAG, *2020-2045 RTP/SCS (Connect SoCal)*, adopted September 2020.

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.<sup>60</sup>

The administrative record of the promulgation of the CEQA 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.”<sup>61</sup>

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

*(n) Mobile Source Reductions*

In response to the transportation sector accounting for a large percentage of California’s CO<sub>2</sub> emissions, AB 1493, the “Pavley Standard,” required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits for reductions achieved prior to the operative date AB 1493, utilizing the 2000 model year as the baseline for calculating those reductions. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.<sup>62</sup>

The federal CAA ordinarily preempts state regulation of motor vehicle emission standards; however, California has been allowed set its own standards with a federal CAA waiver from the U.S. EPA. In June 2009, the U.S. EPA granted California the waiver. However, the U.S. EPA and United States Department of Transportation (USDOT) adopted federal standards for model year 2012 through 2016 light-duty vehicles, which corresponds to the vehicle model years regulated under the State’s Pavley Phase I standards. In addition, the U.S. EPA and USDOT have adopted GHG emission standards for model year 2017 through 2025 vehicles, which corresponds to the vehicle model years regulated under the State’s Pavley Phase II standards. These standards are slightly different from the State’s model year 2017 through 2025 standards, but the State of

<sup>60</sup> 14 Cal. Code Regs. § 15064.4(b).

<sup>61</sup> Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources (April 13, 2009).

<sup>62</sup> CARB, *Clean Car Standards - Pavley, Assembly Bill 1493*, website: <https://www.arb.ca.gov/cc/ccms/ccms.htm>.

California has agreed not to contest these standards, in part due to the fact that while the national standard would achieve slightly less reductions in California, it would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction goals. In 2012, CARB adopted regulations that allow manufacturers to comply with the 2017 through 2025 national standards to meet State law (i.e., the State's Pavley Phase II standards still apply by law; however, meeting the national standards for model year 2017 through 2025 also meets State law).

(o) *Low Carbon Fuel Standard*

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction 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.<sup>63</sup> In 2009, CARB approved for adoption the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations, Sections 95480-95490. The LCFS will reduce GHG emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020. In September 2018, the standards were amended by CARB to require a 20 percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.

(p) *Advanced Clean Cars Program*

In January 2012, CARB approved the Advanced Clean Cars Program,<sup>64</sup> an emissions-control program for model years 2015 through 2025. The components of the Advanced Clean Cars program include 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 (i.e., 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.<sup>65</sup> 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 75 percent less smog-forming pollution than the average car sold in 2012. At its 2017 mid-term evaluation, CARB

<sup>63</sup> California Air Resources Board, *Initial Statement of Reason for Proposed Regulation for The Management of High Global Warming Potential Refrigerant for Stationary Sources*, October 23, 2009.

<sup>64</sup> *Advanced Clean Cars Program*, website: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>.

<sup>65</sup> CARB, *Advanced Clean Cars Program, About*, [ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about](https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about)

determined that the GHG standards remain appropriate for 2022 through 2025 model years.

*(q) Title 24 Energy Efficiency Standards*

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standards. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Standards went into effect on January 1, 2020, and improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 update to the Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The most significant efficiency improvements to the residential Energy Efficiency Standards include the introduction of photovoltaic power systems into the prescriptive package and improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential Standards include alignment with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2017 national standards. The 2019 Energy Efficiency Standards also include changes made throughout all of its sections to improve the clarity, consistency, and readability of the regulatory language. The Energy Efficient Standards require that enforcement agencies determine compliance with CCR, Title 24, Part 6 before issuing building permits for any construction.<sup>66</sup>

*(r) California Green Building Standards*

The California Green Building Standards Code, which is Part 11 of Title 24 Building Energy Efficiency Standards, Part 6 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The first edition of the CALGreen Code was released in 2008 and contained only voluntary standards. The 2019 CALGreen Code, which was recently updated as part of the Title 24 Building Energy Efficiency Standards and became

<sup>66</sup> *California Energy Commission, 2019 Building Energy Efficiency Standards, December 2018, <https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf>, accessed December 2020.*

effective on January 1, 2020, includes both voluntary and mandatory energy efficiency standards for commercial and residential buildings. The CalGreen Code is intended to to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.”<sup>67</sup> The CALGreen Code contains such requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, and site irrigation conservation and more. As noted above, compliance with Title 24 is enforced through the building permit process. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems are functioning at their maximum efficiency.

(s) *Cap-and-Trade Program*

The original Climate Change Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. According to CARB, implementing the 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, the mid-term target of 40 percent below 1990 levels by 2030, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. 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.

CARB adopted the 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. AB 398 established the Compliance Offsets Protocol Task Force, responsible for developing methodologies for the quantification of voluntary GHG emissions reductions, often referred to as Compliance Offset Protocols. All GHG emissions reductions achieved and quantified by these Compliance Offset Protocols must be real, permanent, quantifiable, verifiable, enforceable, and additional to any GHG emissions reductions otherwise required by law or regulation or that otherwise would occur. The Compliance Offsets Protocol Task Force will also establish CARB offset credits, which are tradable compliance instruments that represent verified GHG emissions reductions or removal enhancements made in sectors and sources not covered by the Cap-and-Trade Program.

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<sup>67</sup> *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

In the Cap-and-Trade Program, covered entities may use CARB offset credits to fulfill a limited portion of their compliance obligation. The Compliance Offset Protocols shall be market-based mechanisms for the purpose of increasing offset projects with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions. Moreover, AB 398 continues the gradual reduction in the number of allowances given to industries and reduces carbon offset credits to 4 percent from 2021 through 2025 and 6 percent from 2026 through 2030.

The Cap-and-Trade Program is designed to reduce GHG emissions from major sources, such as refineries and power plants, (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s and SB 32’s emission-reduction mandates of reducing GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program’s duration.

Covered entities that emit more than 25,000 MTCO<sub>2</sub>e per year must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO<sub>2</sub>e 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). As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California’s GHG emissions.<sup>68</sup>

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

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<sup>68</sup> CARB News, released November 3, 2016, website: <https://ww2.arb.ca.gov/news/air-resources-board-announces-100-percent-compliance-cap-and-trade-regulation>, accessed August 2018.

from combustion of other fossil fuels not directly covered at large sources in the Program’s first compliance period.

The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are “supplied” (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with VMT are covered by the Cap-and-Trade Program.

If California’s direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California’s direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB, 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.

Due in part to the Cap-and-Trade Program that makes fossil fuel generation more expensive, cleaner out-of-state electricity is increasingly taking the place of fuels such as coal. This includes more imports of hydroelectric power from outside the state, which grew by nearly 39 percent in 2016 due to abundant rainfall throughout the West Coast.<sup>69</sup>

### (3) Regional

#### (a) *Southern California Association of Governments*

On September 1, 2020, SCAG’s Regional Council adopted an updated Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) known as the 2020–2045 RTP/SCS or Connect SoCal. As with the 2016–2020 RTP/SCS, the purpose of the 2020–2045 RTP/SCS is to meet the mobility needs of the six-county SCAG region over the subject planning period through a roadmap identifying sensible ways to expand transportation options, improve air quality and bolster Southern California long-term economic viability.<sup>70</sup> The goals and policies of the 2020–2045 RTP/SCS are similar to, and consistent with, those of the 2016–2040 RTP/SCS. Hence, because the Proposed Project would be consistent with the 2016–2040 RTP/SCS as discussed later in this

<sup>69</sup> *Climate Pollutants Fall Below 1990 Levels For The First Time*, website: <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time>.

<sup>70</sup> SCAG, *News Release: SCAG Regional Council Formally Adopts Connect SoCal*, September 3, 2020.

section, the Proposed Project would also be consistent with the 2020–2045 RTP/SCS.<sup>71</sup> Because the 2020–2045 RTP/SCS was adopted by SCAG subsequent to both circulation of the Notice of Preparation (NOP) for the Project on February 20, 2019 and approval by LADOT of the Transportation Assessment for the Project on March 26, 2020, this section and the balance of this Draft EIR provided detailed analysis of Project consistency with the 2016–2040 RTP/SCS.

The 2016-2040 RTP/SCS, adopted on April 6, 2016, is an update to the 2012-2035 RTP/SCS that further integrates land use and transportation in certain areas so that the region as a whole can grow smartly and sustainably. The 2016-2040 RTP/SCS balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The 2016-2040 RTP/SCS integrates land use, housing and environmental strategies with transportation planning to help meet emissions reduction targets set by the CARB, as required by SB 375.

Between 2015 and 2040, the region is anticipated to experience increases in population, households and jobs. The 2016-2040 RTP/SCS includes land use strategies, based on local general plans, as well as input from local governments, to reduce GHG emissions through decreases in regional per capita VMT. As part of the 2016-2040 RTP/SCS, transportation network improvements would be included, and more compact, infill, walkable and mixed-use development strategies to accommodate new region growth would be encouraged to accommodate increases in population, households, employment, and travel demand.

The 2016-2040 RTP/SCS defines High Quality Transit Areas (HQTAs) as generally walkable transit villages or corridors that are within one half-mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours. The goal of which is to encourage high density residential development in HQTAs. HQTAs will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040. The 2016–2040 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s HQTAs.

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<sup>71</sup> For example, the Proposed Project would be consistent with both the 2016–2040 RTP/SCS and the 2020–2045 RTP/SCS because it would increase urban density within an High Quality Transit Area (HQTA) located less than 0.5 miles from a planned Metro Purple light rail station and in close proximity to more than a dozen bus routes, would include transit-oriented development, and would implement TDM, all of which would reduce the City’s per capita VMT and associated air emissions. Another example is that because the Proposed Project would be consistent with the City’s existing General Plan land use designation and zoning of the Project Site, it has been accounted for in the regional growth projections in both the 2016–2040 RTP/SCS and 2020–2045 RTP/SCS.

Within the 2016-2040 RTP/SCS, the SCS chapter demonstrates the region's ability to attain and exceed the GHG emission reduction targets set forth by the CARB. The SCS chapter outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The 2016–2040 RTP/SCS focuses the majority of new housing and job growth in HQTAs and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

The SCAG region must achieve specific federal air quality standards and is required by State law to lower regional GHG emissions. On June 28, 2016, CARB accepted SCAG's quantification of GHG emission reductions from the 2016–2040 RTP/SCS and the determination that the 2016–2040 RTP/SCS would, if implemented, achieve the region's GHG targets with an 8 percent per capita reduction by 2020, an 18 percent reduction per capita by 2035, and a 21 percent reduction per capita by 2040.<sup>72</sup> This level of reduction would meet and exceed the region's GHG targets set by CARB of 8 percent per capita by 2020 and 13 percent per capita by 2035. The 2016–2040 RTP/SCS would result in an estimated 21 percent decrease in per capita GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21 percent decrease in per capita GHG emissions by 2040 (an additional 3 percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

SCAG's SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

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<sup>72</sup> CARB Executive Order G-16-066, [www.arb.ca.gov/cc/sb375/scag\\_executive\\_order\\_g\\_16\\_066.pdf](http://www.arb.ca.gov/cc/sb375/scag_executive_order_g_16_066.pdf)

Subsequent to adoption of the 2016-2040 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 2016-2040 RTP/SCS and 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.

(b) SCAQMD

The South Coast Air Quality Management District (SCAQMD) is principally responsible for comprehensive air pollution control in the South Coast Air Basin, which includes Los Angeles, Orange, and the urbanized portions of Riverside and San Bernardino Counties, including the Project Site. SCAQMD works directly with the Southern California Association of Governments, county transportation commissions, and local governments and cooperates actively with all federal and state government agencies to regulate air quality. SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

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

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. 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 metric tons per year. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold 10,000 MTCO<sub>2e</sub> per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects). Although SCAQMD formed a GHG Significance Threshold Working Group to further evaluate

potential GHG significance thresholds, this group has not met since 2010,<sup>73</sup> and the SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

#### (4) Local

##### (a) *City of Los Angeles Sustainable City pLAN/ L.A.'s Green New Deal*

On April 8, 2015, Mayor Eric Garcetti released Los Angeles' first ever Sustainable City pLAN (The pLAN). The pLAN sets the course for a cleaner environment and a stronger economy, with commitment to equity as its foundation. The pLAN is made up of short term (by 2017) and long term (2025 and 2035) targets 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 pLAN set out an ambitious vision for cutting GHG emissions, reducing the impact of climate change and building support for national and global initiatives. The Sustainable City pLAN sets targets to reduce GHG emissions below the 1990 baseline by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050. Specific targets include increasing the proportion of new housing units built within 1,500 feet of transit to 57% by 2025, reducing VMT per capita by 5 percent by 2025, and increasing trips made by walking, biking or transit by at least 35 percent by 2025.

In 2019, the Mayor's office updated the Sustainable City pLAN with the release of the Green New Deal Sustainable City pLAN 2019 (L.A.'s Green New Deal), which establishes accelerated goals for a cleaner environment and a stronger economy, with commitment to equity as its foundation. L.A.'s Green New Deal reported that in 2017 approximately 30% of the LADWP's total energy production was from renewable energy sources.<sup>74</sup> The Sustainable City pLAN / L.A.'s Green New Deal is guided by four key principles: (i) to uphold the Paris Climate Agreement; (ii) to deliver environmental justice and equity through an inclusive green economy; (iii) to ensure every Angeleno has the ability to join the green economy by creating pipelines to good paying, green jobs; and (iv) to lead by example within City government.

L.A.'s Green New Deal sets the following targets for a sustainable city:

- Supply 55% renewable energy by 2025; 80% by 2036; and 100% by 2045.

<sup>73</sup> *South Coast Air Quality Management District, Greenhouse Gases CEQA Significance Thresholds, website: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/page/2>, accessed June 2017.*

<sup>74</sup> *City of Los Angeles, L.A.'s Green New Deal, Sustainable City Plan, 2019.*

- Source 70% of water locally by 2035, and capture 150,000 acre ft/yr (AFY) of stormwater by 2035.
- Reduce building energy use per square foot for all types of buildings 22% by 2025; 34% by 2035; and 44% by 2050.
- Reduce Vehicle Miles Traveled per capita by at least 13% by 2025, 39% by 2035, and 45% by 2050.
- Ensure 57% of new housing units are built within 1,500 feet of transit by 2025; and 75% by 2035.
- Increase the percentage of zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050.
- Create 300,000 green jobs by 2035; and 400,000 by 2050.
- Convert all city fleet vehicles to zero emission where technically feasible by 2028.
- Reduce municipal GHG emissions 55% by 2025 and 65% by 2035 from 2008 baseline levels, reaching carbon neutral by 2045.<sup>75</sup>

*(b) City of Los Angeles Green Building Code*

In 2010, the City adopted the 2010 CALGreen, with amendments, as Ordinance No. 181,480, thereby codifying provisions of CALGreen as the new L.A. Green Building Code, applicable to new development projects. As amended by Ordinance 186,488 in 2019, the L.A. Green Building Code incorporates by reference portions of the 2019 Edition of the CALGreen Code. The LA Green Building Code imposes more stringent green building requirements than those contained within the CALGreen Code, and is applicable to the construction of every new building, every new building alteration with a permit valuation of over \$200,000, and every building addition unless otherwise noted. The L.A. Green Building Code, as amended, contains both mandatory and voluntary green building measures for the reduction of GHG emissions through energy conservation. Among many requirements, the L.A. Green Building Code requires projects to incorporate infrastructure to support future electric vehicle supply equipment (EVSE), reduce the overall use of potable water by 20 percent, meet the applicable provisions of the California Energy Code, and comply with the construction and demolition solid waste handling and diversion requirements mandated in Section 66.32 of the LAMC, among other provisions.

<sup>75</sup> *City of Los Angeles, L.A.'s Green New Deal, Sustainable City Plan, 2019.*

Compliance with the L.A. Green Building Code is enforced through the building permit process.

(c) *Transportation Impact Study Guidelines*

In July 2019, the City of Los Angeles Department of Transportation (LADOT) issued the Transportation Assessment Guidelines (TAG) to create a review process that advances the City's vision of developing a safe, accessible, well-maintained, and well-connected multimodal transportation network. The TAG supersedes the previous Transportation Impact Study Guidelines from December 2016 and conforms to the requirement of SB 743 which shifts the focus of transportation analysis from level of service to VMT. The TAG has been developed to identify land use development and transportation projects that may impact the transportation system; to ensure proposed land use development projects achieve site access design requirements and on-site circulation best practices; to define whether off-site improvements are needed; and to provide step-by-step guidance for assessing impacts and preparing Transportation Assessment Studies.

(d) *City of Los Angeles General Plan*

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

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

## Existing Conditions

### (5) Existing State-Wide GHG Emissions

The California statewide GHG inventory is a critical piece, in addition to data from various AB 32 programs, in demonstrating the state's progress in achieving the statewide GHG targets established by AB 32 (reduce emissions to the 1990 levels by 2020) and SB 32 (reduce emissions to at least 40 percent below the 1990 levels by 2030). The 2018 edition of the GHG inventory includes the emissions of the seven GHGs identified in AB 32 for the years 2000 to 2016 and uses an inventory scope and framework consistent with international and national GHG inventory practices.

CARB compiles GHG inventories for the State of California. Based on the 2017 GHG inventory data (i.e., the latest year for which data are available from CARB) prepared by CARB in 2019, California's annual statewide GHG emission inventory was estimated at 424 MMTCO<sub>2e</sub>.<sup>76</sup> A table summary of the emissions reported by sector is provided below in Table IV.C-3.

**Table IV.C-3  
California's 2017 Annual Statewide GHG Emissions by Sector**

Sector	Emissions by Economic Sector
Transportation	40.1%
Industrial	21.1%
Electricity Generation (In State)	9.1%
Electricity Generation (Imports)	3.6%
Agriculture	7.6%
Residential	6.1%
Commercial	3.6%
High GWP (Refrigerants/Other)	4.7%
Waste	2.1%
Not Specified	<1%
<b>Total Emissions</b>	<b>100%</b> <b>424 MMTCO<sub>2e</sub></b>
<i>Source: CARB, 2019 Edition, California Greenhouse Gas Emission Inventory - at page 6 (see footnote 77, below).</i>	

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine emitting activities statewide were 424 MMTCO<sub>2e</sub>, representing an overall decrease of 5 percent as compared to 2016 and a 14 percent decrease since peak levels in 2004 and are 7 MMTCO<sub>2e</sub> below the 1990 level, which is the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.1 tons per person to 10.7 tons per person in

<sup>76</sup> CARB, 2019 Edition, California Greenhouse Gas Emission Inventory, 2000-2017, website: accessed at <http://www.arb.ca.gov/cc/inventory/data/data.htm>.

2017, a 24 percent decrease.<sup>77</sup> Overall trends in the inventory also demonstrate that the carbon intensity of California’s economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state’s GDP has grown 52 percent during this period. In 2017, GDP grew 3.6 percent while the emissions per GDP declined by 4.5 percent compared to 2016.<sup>78</sup>

(6) Existing Development Site GHG Emissions

The Development Site is currently developed with 151,048 square feet of retail land uses and associated surface parking. GHG emissions are currently generated by the existing uses within the Development Site from stationary sources, such as space and water heating, electricity use, water use, solid waste generation, and from mobile vehicle traffic traveling to and from the Development Site. The average annual GHG emissions generated by the existing uses at the Development Site have been estimated utilizing the CalEEMod computer model recommended by the SCAQMD. Table IV.C-4, Existing Development Site GHG Emissions, presents the GHG emissions associated with existing operations of the Development Site. As shown in Table IV.C-4, the existing uses on the Development Site generate approximately 7,398 MTCO<sub>2e</sub> per year.

**Table IV.C-4  
Existing Development Site GHG Emissions**

<b>Emissions Source</b>	<b>CO<sub>2e</sub> Emissions (Metric Tons per</b>
Area	<0.01
Energy	1,546
Mobile (Motor Vehicles)	5,584
Waste	113
Water	150
Stationary	5
<b>Total</b>	<b>7,398</b>
<i>Calculation data and results provided in Appendix E to this Draft EIR. Source: Parker Environmental Consultants, 2020.</i>	

<sup>77</sup> CARB, 2019 Edition, California Greenhouse Gas Emission Inventory, 2000-2017, website: accessed at <http://www.arb.ca.gov/cc/inventory/data/data.htm>

<sup>78</sup> Ibid.

### 3. Project Impacts

#### a) Thresholds of Significance

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

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

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

Section 15064.4 of the CEQA Guidelines was adopted to assist lead agencies in determining the significance of the impacts of GHGs. This section states that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data to describe, calculate or estimate the amount of GHGs resulting from a project. A lead agency shall have the discretion to determine, in the context of a particular project, whether to quantify GHGs resulting from a project; and/or rely on a qualitative analysis or performance based standards. This section also states that lead agencies should consider the following factors, among others, when determining the significance of impacts from GHGs on the environment, including: (i) the extent to which the project may increase or reduce GHG emissions compared to existing conditions; (ii) whether the project exceeds an applicable significance threshold that the lead agency determines applies to the project; and (iii) 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 GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies are given discretion to utilize significance thresholds for their respective jurisdictions in which 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, as required by CEQA Guidelines Section 15130(f).<sup>79</sup> As a note, the CEQA Guidelines were amended in response to SB 97 to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

<sup>79</sup> See generally Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources (April 13, 2009).

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 will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program 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. 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." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significance for GHG emissions if a project complies with regulatory programs to reduce GHG emissions.<sup>80</sup>

In the absence of an adopted numeric threshold that applies to projects in the City of Los Angeles, the significance of the Proposed Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the Proposed Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For the Proposed Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the 2016–2040 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers consistency with regulations or requirements adopted by the Climate Change Scoping Plan and subsequent updates, and the Sustainable City pLAN/L.A.'s Green New Deal.

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<sup>80</sup> See, for example, *San Joaquin Valley Air Pollution Control District (SJVPCD), 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 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<sub>2</sub>e/yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, *Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project*, SCH No. 2012041014 (October 2014); SCAQMD, *Final 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 *Final Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project*, SCH No. 2014121014 (October 2015).

## b) Methodology

Because 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 Proposed Project's GHG-related impacts on the environment. The 2016–2040 RTP/SCS 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. CARB's Climate Change Scoping Plan, SCAG's 2016-2040 RTP/SCS; and Sustainable City pLAn / L.A.'s Green New Deal all apply to the Proposed Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32. Thus, the Lead Agency has determined that the Proposed Project would not have a significant effect on the environment if the Proposed Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Climate Change Scoping Plan, SCAG's 2016-2040 RTP/SCS, and the Sustainable City pLAn / L.A.'s Green New Deal.

However, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Proposed Project using recommended air quality models, as described below. The primary purpose of quantifying the Proposed 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 quantify and determine the reduction in the Proposed Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. The significance of the Proposed Project's GHG emissions impacts is not based on the quantification of GHG emissions provided herein.

As discussed above, OPR has noted that lead agencies "should make a good-faith effort to calculate or estimate GHG emissions from a project."<sup>81</sup> GHG emissions are quantified below, consistent with OPR guidelines.

A project's GHG emissions typically are very small in comparison to state or global GHG emissions. In isolation, a project has no significant direct impact on climate change. However, the increased accumulation of GHGs from more than one project and many

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<sup>81</sup> OPR, *Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, June 2008*, (at p. 5) website: <https://www.opr.ca.gov/docs/june08-ceqa.pdf>, accessed March 2020.

sources in the atmosphere may result in global climate change, which can cause the adverse environmental effects previously discussed. Accordingly, the threshold of significance for GHG emissions determines whether a project's contribution to global climate change is "cumulatively considerable." Many air quality agencies, including the SCAQMD, concur that GHG and climate change should be evaluated as a cumulative impact, rather than project-direct impact. Not every individual project that emits GHG must necessarily be found to contribute to a significant cumulative impact on the environment.<sup>82</sup>

The Proposed Project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions and the Proposed Project impacts.

In view of the above considerations, this Draft EIR quantifies the Proposed Project's total annual GHG emissions, taking into account the GHG emission reduction features that would be incorporated into the Project's design. Consistent with evolving scientific knowledge, approaches to GHG quantification may continue to evolve in the future. For purposes of quantifying the efficacy of the Proposed Project's compliance with the various regulations, plans and policies identified above, the Proposed Project's site-specific conditions, project design features, or code compliance measures are reflected under the "mitigated" scenario in the CalEEMod worksheets.<sup>83</sup> This is because many features in the CalEEMod Program that are defined as mitigation measures in the model are only available under the mitigation input and are not reflected in the base case. For example, all building structures shall meet or exceed 2016 Title 24, Part 6 Standards and meet Los Angeles Green Building Code Standards; including:

- Energy efficient elevators, mechanical systems, and glazing and window frames.
- High-efficiency lighting within buildings on-site.
- ENERGY STAR-compliant appliances wherever appliances are required on-site.
- Five percent of the required parking spaces (50 spaces) would be provided with a charger for electric vehicles within the parking garage.

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<sup>82</sup> *State of California, Office of Planning and Research, Discussion Draft, CEQA and Climate Change Advisory, pg. 10, December 2018.*

<sup>83</sup> *Although the Proposed Project incorporates these features and is referred to as the "mitigated scenario" within CalEEMod, these features are not considered "mitigation measures" as defined by CEQA, and does not mean the Proposed Project will result in a significant impact requiring implementation of such a mitigation measure. The "Mitigated Scenario" is only for modeling purposes.*

- All faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures that would reduce indoor water demand by 20% per CalGreen Standards;
- Water-efficient irrigation systems are to be used on-site per City requirements;
- Recycling programs will be required that reduces waste to landfills by a minimum of 75 percent (per AB 341);

In addition to the above features mandated under the Los Angeles Green Building Code, LAMC Section 12.21.G(a)(3) requires that the Proposed Project provide at least 83 trees and 7,896 square feet of landscaping (e.g., 25 percent of the required open space is required to be landscaped.)

Compliance with these regulations can only be calculated under the “mitigation” screen in CalEEMod. The project features and regulatory compliance measures included in the CalEEMod analysis are largely based on the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures document.<sup>84</sup> The CAPCOA measure numbers are provided next to the mitigation measures in CalEEMod to assist the user in understanding each measure by referencing back to the CAPCOA document. This methodology does not establish a quantitative threshold of significance, rather it is provided for information purposes that demonstrate the GHG reduction levels achieved through compliance with applicable GHG reduction policies and regulations.

### (1) Quantifying GHG Emissions

The GHG emissions generated by the construction and operation of the Proposed Project were estimated utilizing the CalEEMod computer model (*Version 2016.3.2*) recommended by SCAQMD and to satisfy CEQA Guidelines Section 15064.4(a). The primary purpose of the GHG emissions inventory are to demonstrate the reduction in the Proposed Project’s incremental contribution of GHG emissions that result from regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions, and to provide further justification that the Proposed Project would be consistent with plans adopted for the reduction of GHG emissions. Each source of GHG

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<sup>84</sup> (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures, August 2010.*

emissions is described in greater detail below and include area sources,<sup>85</sup> energy usage,<sup>86</sup> mobile sources,<sup>87</sup> stationary sources,<sup>88</sup> waste,<sup>89</sup> water<sup>90</sup> and sequestration.<sup>91</sup>

(a) *Construction-Related Emissions*

Construction emissions were calculated using CalEEMod *Version 2016.3.2*, which is based on OFFROAD model outputs. OFFROAD is an emissions estimation model developed by CARB to calculate emissions from off-road road equipment, including construction equipment. The output values used in this analysis were modeled to be project-specific, based on equipment mix, usage rates (hours per day), and length of construction schedule. For a complete discussion on these construction assumptions, see Section IV.A, Air Quality, of this Draft EIR. The mobile source emission methodology for on-road construction emissions, associated with worker commute and delivery of materials, uses a VMT rate calculated by CalEEMod in order to generate values for

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<sup>85</sup> *Area sources include emissions from consumer products, landscape equipment and architectural coatings. No changes were made to the default area source emissions.*

<sup>86</sup> *Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters.*

<sup>87</sup> *Mobile sources include emissions from the additional vehicle miles generated from the Project. The vehicle trips associated with the Project have been analyzed based on the project trip generation calculated in the Project's traffic study. Emissions of GHGs associated with mobile sources from operation of the Project are based on the average daily trip rate, trip distance, the GHG emission factors for the mobile sources, and the GWP values for the GHGs emitted. The types of vehicles that would visit the Project Site include all vehicle types including automobiles, light-duty trucks, delivery trucks, and waste haul trucks. Modeling for the Project was conducted using the vehicle fleet mix for the Los Angeles County portion of the South Coast Air Basin as provided in EMFAC2014 and CalEEMod.*

<sup>88</sup> *Stationary sources for the Project include emissions from emergency generators.*

<sup>89</sup> *Waste includes the GHG emissions generated from the processing of waste from the Project as well as the GHG emissions from the waste once it is interred into a landfill. According to the City of Los Angeles Zero Waste Progress Report (March 2013), the City achieved a landfill diversion rate of approximately 76 percent by year 2012. AB 341 requires that 75 percent of waste be diverted from landfills by 2020, reductions for this are shown in the mitigated CalEEMod output values. No other changes were made to the default waste parameters.*

<sup>90</sup> *Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. California Green Building Standards require a 20 percent reduction in indoor water usage, reductions for this are shown in the mitigated CalEEMod output values. No other changes were made to the default water usage parameters.*

<sup>91</sup> *The analysis includes reduction of GHG emissions from the planting of 83 new trees. The California Air Pollution Control Officers Association (CAPCOA) states that trees sequester carbon dioxide over 20 years of their life, after that, sequestration is nominal and outweighed by tree maintenance-related emissions.*

annual emissions. Emission factors are derived from the 2014 EMFAC model using light duty automobile factors for worker commute and heavy-duty truck factors for deliveries.

Section IV.A, Air Quality, of this EIR identifies a number of regulatory compliance measures that will have a direct reduction in the Proposed Project's generation of GHGs. For example, the Proposed Project would comply with Section 2485 in Title 13 of the California Code of Regulations, which limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction to five minutes at any location. Additionally, the Proposed Project would be required to comply with South Coast Air Quality Management District Rule 1113, which limits the volatile organic compound content of architectural coatings. Adherence to these applicable regulatory compliance measures would serve to reduce the Proposed Project's construction-related GHG emissions.

Pursuant to SCAQMD guidance recommended in the SCAQMD GHG Working Group meeting on November 19, 2009, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. Therefore, the SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures address construction GHG emissions as part of the operational GHG reduction strategies.<sup>92</sup> Therefore, total construction GHG emissions were divided by 30 to determine annual construction emissions comparable to operational emissions.

*(b) Operational Emissions*

CalEEMod *Version 2016.3.2* was used to calculate the energy use and potential emissions generated by development of the Proposed Project. These factors include motor vehicles, electricity, natural gas, water usage/wastewater generation, landscaping/maintenance equipment, and solid waste generation and disposal.

Motor vehicle emission calculations associated with operation of the Proposed Project use a projection of annual VMT, which is derived from the trips provided in the Proposed Project traffic study and the default trip characteristics in CalEEMod. These values account for the daily and seasonal variations in trip frequency and length associated with travel to and from the Project Site and other activities that require a commute and are based on LADOT's VMT Calculator tool.

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<sup>92</sup> SCAQMD Governing Board Agenda Item 31, December 5, 2008,

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. Combustion of any type of fuel emits criteria pollutants and GHGs directly into the atmosphere; when this occurs in a building this is a direct emission source associated with that building and CalEEMod calculates all of these pollutants. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used, the electricity generation typically takes place offsite at a power plant; electricity use generally causes emissions in an indirect manner and therefore GHG emissions have been calculated from electricity generation.

The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. It will often be the case that the water treatment and wastewater treatment occur outside of the project area. In this case, it is still important to quantify the energy and associated GHG emissions attributable to water and wastewater treatment and conveyance. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide. Thus, CalEEMod calculates indirect GHG emissions from energy use, water/ wastewater conveyance and wastewater treatment for wastewater flows generated by the Proposed Project.

Municipal solid waste (MSW) is the amount of material that is disposed of by land filling, recycling, or composting. CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. If waste disposal information was not available, waste generation data was used. CalEEMod uses the overall California Waste Stream composition to generate the necessary types of different waste disposed into landfills. CalEEMod quantifies the GHG emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon. CalEEMod also quantifies the CO<sub>2</sub> emissions associated with the combustion of methane, if applicable. Default landfill gas concentrations were used as reported in Section 2.4 of AP-42.<sup>93</sup> The IPCC has a similar method to calculate GHG emissions from MSW in its 2006 Guidelines for National Greenhouse Gas Inventories.

Planting trees will sequester CO<sub>2</sub> and is considered to result in a one-time carbon-stock change. Trees sequester CO<sub>2</sub> while they are actively growing. The amount of CO<sub>2</sub> sequestered depends on the type of tree. CalEEMod uses default annual CO<sub>2</sub> accumulation per tree for specific broad species classes.

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<sup>93</sup> See AP-42, *Fifth Edition, Compilation of Air Pollutant Emission Factors*, prepared by the Office of Air Quality Planning and Standards, U.S. EPA, January 1995.

### c) Project Design Features

**PDF GHG-1:** The Proposed Project will not include any hearths and/or fireplaces within any of the residential units.

**PDF GHG-2:** The Proposed Project will provide a pedestrian portal through the parking level on the ground floor to facilitate a safe pedestrian access from S. Ogden Drive to the Center parking lot.

### d) Analysis of Project Impacts

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

**Threshold (b):** *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

#### (1) Consistency with Applicable Plans and Policies

##### (a) Consistency with the Climate Change Scoping Plan

As described herein, compliance with applicable GHG emissions reduction plans would result in less-than-significant project and cumulative impacts. Table IV.C-5, below, identifies the Scoping Plan policies that are applicable to the Proposed Project and provides a consistency analysis demonstrating how the pertinent policies relate to or are accommodated by the Proposed Project. As shown, the Project would be consistent with the applicable GHG reduction plans and policies of the Scoping Plan.

**Table IV.C-5  
Consistency with Applicable 2017 Scoping Plan Measures**

Measures	Consistency Analysis
<p><b>Implement SB 350 by 2030:</b></p> <ul style="list-style-type: none"> <li>• Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.</li> <li>• 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.</li> <li>• Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Plans (IRP) 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.</li> </ul>	<p><b>No Conflict.</b> The Proposed Project complies with this measure inasmuch as the Proposed Project would use energy from the Los Angeles Department of Water and Power (LADWP), which has committed to diversify its portfolio of energy sources to achieve 50 percent renewables by 2030.</p> <p><b>No Conflict.</b> The Proposed Project complies with this measure inasmuch as the Proposed Project would be designed and constructed to meet the L.A. Green Building Code for renovation and new construction and will include several measures designed to reduce energy consumption.</p> <p><b>No Conflict.</b> The Proposed Project would be designed and constructed to meet LA Green Building Code standards, where applicable by including several measures designed to reduce energy consumption. The Proposed Project includes ENERGY STAR-rated appliances within the dwelling units and would be a modern development with energy efficient boilers, heaters and air conditioning systems.</p>
<p><b>Implement Mobile Source Strategy (Cleaner Technology and Fuels):</b></p> <ul style="list-style-type: none"> <li>• 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.”</li> </ul>	<p><b>No Conflict.</b> SB 375 requires SCAG to prepare the SCS for the region, which is discussed further below. The Proposed Project represents an infill development within an existing urbanized area that would concentrate residential and commercial retail uses within an HQTAs. The Proposed Project would include a mix of land uses including residential and commercial that would provide new opportunities to live and work within an HQTAs, resulting in decreased vehicle miles traveled within the City. Therefore, the Proposed Project would be consistent with SCAG’s 2016–2040 RTP/SCS, which specifically encourages this type of development. The Proposed Project would also provide direct bicycle and pedestrian access to the W. 3<sup>rd</sup> Street and S. Fairfax Avenue which would activate the street frontage. Currently the retail shops are set back from W. 3<sup>rd</sup> Street with a surface parking lot separating the retail shops from the street. Thus, this would serve to improve walkability, reduce vehicles-per-miles traveled, promote alternatives to driving, and to reduce GHG emissions. As noted in Section IV.I, Transportation, trip reduction credits were factored into the proposed Project’s trip generation calculation in</p>

	<p>consultation with LADOT staff to account for the mixed-use nature of this infill Proposed Project. The mix of residential, restaurant, and retail uses would provide synergy between the land uses in terms of trip making. Some of the commercial employees may also live on-site, and commercial employees, Proposed Project residents and nearby residents would be patrons of the new retail and restaurant uses. The Project Site is also served by a number of transit lines including two Metro Rapid bus line (705 and 780), nine Metro Local Bus lines (14, 16, 17, 316, 105, 212, 312, 217, and 218) and one LADOT DASH line (DASH Fairfax) which would all serve to reduce vehicle trips. Additionally, the Project Site is located less than 0.5 mile north of the planned Metro Purple Line Wilshire/Fairfax Station, which is currently under construction and anticipated to be operational by 2023.</p>
<p><b>By 2019, adjust performance measures used to select and design transportation facilities.</b></p> <ul style="list-style-type: none"> <li>• Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).</li> </ul>	<p><b>No Conflict.</b> The Proposed Project complies with this measure inasmuch as the Proposed Project would be designed to promote and support pedestrian activity on-site and in the Project Site area. The Proposed Project would provide pedestrian connectivity to W. 3<sup>rd</sup> Street and Fairfax Avenue. The Proposed Project would provide pedestrian amenities and commercial uses facing W. 3<sup>rd</sup> Street that would promote pedestrian activity along this commercial corridor. Additionally, the Project Site is within proximity to many services, job opportunities, and transit opportunities along W. 3<sup>rd</sup> Street and Fairfax Avenue. The nearest bus stop to the Project Site is adjacent to the Project Site, along W. 3<sup>rd</sup> Street, and 13 local and inter-city transit bus routes are accessible within ½ mile walking distance from the Project Site. Additionally, the Project Site is also located less than 0.5 mile north of the planned Metro Purple Line Wilshire/Fairfax Station, which is currently under construction and anticipated to be operational by 2023.</p>
<p><b>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.</b></p>	<p><b>No Conflict.</b> The Proposed Project complies with this measure inasmuch as the Proposed Project would comply with AB 341, which sets a statewide policy goal that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. LAMC Section 66.32.1 requires all persons who collect, remove or transport solid waste, including C&amp;D waste generated within the City, to obtain an AB 939 Compliance Permit from the Bureau of Sanitation. Compliance with this measure would ensure all C&amp;D waste is transported to a Certified C&amp;D waste processing</p>

	<p>facility for the purpose of recovering reusable and recyclable materials and disposing of non-recyclable residual materials. (see Section IV.J-4, Public Utilities, Solid Waste)</p>
<p><i>Measures not applicable to this Project are not listed.</i>  <i>Source: California’s 2017 Climate Change Scoping Plan, November 2017, pg. 103.</i>  <i>Parker Environmental Consultants, 2020.</i></p>	

Furthermore, in addition to the Project’s consistency with applicable GHG reduction regulations and strategies, the Proposed Project would not conflict with the future anticipated statewide GHG reductions goals. CARB has outlined a number of potential strategies for achieving the 2030 reduction target of 40 percent below 1990 levels, as mandated by SB 32. These potential strategies include renewable resources for half of the State’s electricity by 2030, increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting high-speed rail and other alternative transportation options, and use of high-efficiency appliances, water heaters, and HVAC systems.<sup>94</sup> The Proposed Project would benefit from statewide and utility-provider efforts towards increasing the portion of electricity provided from renewable resources. The utility provider for the Project, LADWP, currently provides 32 percent of electricity via renewable sources but has committed to providing an increasing percentage from renewable sources that exceed the Renewables Portfolio Standard requirements by providing 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036.<sup>95</sup> The Proposed Project would also include an energy efficient elevator, energy efficient mechanical systems, energy efficient glazing and window frames, energy-star appliances to be installed on-site, and the use of high-efficiency lighting. The Proposed Project would also benefit from statewide efforts towards increasing the fuel economy standards of vehicles. The Proposed Project would support reducing VMT growth given its location, design and complementary proposed mix of uses at an infill site that is accessible to existing Metro local and rapid bus lines, and within 0.5 miles of the planned Metro Purple Line Wilshire/Fairfax Station, which is currently under construction and anticipated to be operational by 2023.

As discussed in Table IV.C-5 above, the Proposed Project would be consistent with applicable GHG reduction strategies in the 2017 Climate Change Scoping Plan. The 2017 Scoping Plan also outlines strategies to reduce GHG emissions to achieve the 2030 target from sectors that are not directly controlled or influenced by the Proposed Project, but nonetheless contribute to Proposed Project-related GHG emissions. For instance, the

<sup>94</sup> *Energy + Environmental Economics, Summary of the California State Agencies’ PATHWAYS Project: Long-Term Greenhouse Gas Reduction Scenarios, April 6, 2015,*  
[https://www.arb.ca.gov/html/fact\\_sheets/e3\\_2030scenarios.pdf](https://www.arb.ca.gov/html/fact_sheets/e3_2030scenarios.pdf).

<sup>95</sup> *Los Angeles Department of Water and Power, 2016 Power Integrated Resource Plan, page ES- 1.*

Proposed Project itself is not subject to the Cap-and-Trade regulation; however, Proposed Project-related emissions would decline pursuant to the regulation as utility providers and transportation fuel producers are subject to renewable energy standards, Cap-and-Trade, and the LCFS. While CARB is in the process of expanding the regulatory framework to meet the 2030 reduction target based on the existing laws and strategies in the 2017 Scoping Plan, the Proposed Project would support or would not impede implementation of these potential GHG reduction strategies identified by CARB. Additionally, Pavley I, the Advanced Clean Cars Program, CALGreen and SB-X7-7 outline strategies, as discussed above, to reduce GHG emissions to achieve the 2030 target from sectors that are not directly controlled or influenced by the Proposed Project, but that nonetheless would contribute to reductions in Proposed Project-related GHG emissions.

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

*(b) Consistency with 2016-2040 RTP/SCS*

As previously discussed, the purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the 2016–2040 RTP/SCS is to provide a framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the 2016–2040 RTP/SCS identifies various strategies to reduce per capita VMT. The Proposed Project would be consistent with the following key GHG reduction strategies in SCAG's 2016-2040 RTP/SCS which are based on changing the region's land use and travel patterns:

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

The Proposed Project represents an infill development within an existing urbanized area that would concentrate residential and commercial retail uses within an HQTAs. The Proposed Project would include a mix of land uses including residential and commercial that would concentrate new opportunities to live and work in an HQTAs, resulting in decreased vehicle miles traveled within the City. The Proposed Project would also provide

direct bicycle and pedestrian access to W. 3<sup>rd</sup> Street and S. Ogden Drive that are do not currently exist or are in a condition that does not encourage use. As noted above in PDF GHG-2, the Proposed Project will provide a pedestrian portal through the parking level on the ground floor to facilitate a safe pedestrian access from S. Ogden Drive to the Center parking lot. Pedestrian walkways will be provided throughout the Development Site connecting the publicly accessible residential lobby areas, retail spaces, amenity and open space areas, and parking areas. Amenity and open spaces would be accessible to the public except for those reserved for residential tenants only. Access to the interior residential areas would be provided via secured entry points for residents and controlled visitor access only. Thus, the Proposed Project would serve to reduce vehicles-per-miles traveled, promote alternatives to driving, and to reduce GHG emissions. The Proposed Project increases the density and utilization of the Project Site, and supports and promotes pedestrian activity in the Project Site area by providing a pedestrian-scale development and a mix of multi-family residential, restaurant, and commercial retail uses. As described above, the Proposed Project further promotes the connectivity of the Project Site to the surrounding neighborhood area by providing pedestrian and bicycle access from W. 3<sup>rd</sup> Street, S. Fairfax Avenue, and S. Ogden Drive.

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

- Inclusion of mixed-use development standards that include local serving retail.
- Increased Complete Streets investments around HQTAs. Complete Streets are streets designed, funded and operated to enable safe access for roadway users of all ages and abilities, including pedestrians, bicyclists, motorists and transit riders. The Proposed Project will provide safe, clean and easy to use access points to and from the Development Site, and would provide infrastructure improvements such as reinstalling street gutters, sidewalks, and street lighting (if applicable) along W. 3<sup>rd</sup> Street and S. Ogden Drive as required to the satisfaction of the Department of Building and Safety in the proximity of the Development Site. Such strategies would also include facilitating active transportation options and transit access to residents and visitors of the Proposed Project.
- Compact growth that includes jobs and housing in areas accessible to transit;
- New multi-family housing in an infill location together with neighborhood-serving retail, and restaurant uses.
- New housing and job growth focused in HQTAs (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).

Consistent with SCAG's 2016-2040 RTP/SCS alignment of transportation, land use, and housing strategies, the Proposed Project would accommodate increases in population, households, employment, and travel demand.

The Project Site is located in a HQTAs and promotes the connectivity of the Project Site to the surrounding neighborhood area by providing safe, clean, improved and easy-to-use pedestrian and bicycle access, as described above. The Proposed Project would also provide on-site bicycle storage areas for Project residents and guests to facilitate and encourage alternative modes of transit. Additionally, consistent with 2016-2040 RTP/SCS Goal 6 and 8, the Project Site will be served by a total of thirteen local and inter-city transit operators including two Metro Rapid bus line (705 and 780), nine Metro Local Bus lines (14, 16, 17, 316, 105, 212, 312, 217, and 218), one LADOT DASH line (DASH Fairfax), and the future Purple Line Extension, with the nearest bus stop located adjacent to the Project Site along W. 3<sup>rd</sup> Street, which would serve to improve transportation options. The Proposed Project would provide residents and visitors with convenient access to public transit and opportunities for walking and biking, which would facilitate a reduction in VMT and related vehicular GHG emissions.

Further, the vertical integration of land uses on the Project Site will produce substantial reductions in auto mode share to and from the Project Site that will help the region accommodate growth and promote public transit ridership that minimizes GHG emission increases and reduces per capita emissions, consistent with the RTP/SCS. Additionally, the inclusion of electric vehicle charging infrastructure (per LA Green Building Code) will support the use of electric zero-emission vehicles by Project residents, patrons and visitors.

By analyzing the performance of land use changes and transportation strategies related to GHG emissions reductions, the 2016-2040 RTP/SCS concluded that GHG emissions per capita relative to 2005 emissions would be reduced by 8% in 2020, 18% in 2035, and 21% in 2040 in the SCAG region, which would exceed CARB's required reduction targets. These future GHG goals and conditions would be met in 2040 if investments and strategies detailed in the 2016 RTP/SCS are fully realized.<sup>96, 97</sup> Table IV.C-6 below

<sup>96</sup> SCAG, 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy, adopted April 2016.

<sup>97</sup> In March 2018, the CARB updated the SB 375 targets to require a per capita passenger vehicle emissions reduction of 8 percent reduction by 2020 and a 19 percent decrease in VMT for the SCAG region by 2035 compared to baseline (2005) GHG emissions. As these reduction targets were updated after the 2016–2040 RTP/SCS, it is expected that the next iteration of the RTP/SCS will be updated to include these targets. The 2016–2040 RTP/SCS and the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals.

provides a consistency analysis with each of the goals and policies of the 2016-2040 RTP/SCS:

**Table IV.C-6  
Consistency Analysis with the  
2016-2040 Regional Transportation Plan / Sustainable Community Strategy**

Goals and Policies	Consistency Assessment
<p><b>2016-2040 RTP/SCS Goal 2</b> Maximize mobility and accessibility for all people and goods in the region.</p>	<p><b>No Conflict.</b> The Development Site is located on an approximately 3.15 acre lot that fronts W. 3<sup>rd</sup> Street and S. Ogden Drive. The Proposed Project represents an infill development within an existing urbanized area that would concentrate residential and commercial retail uses within a HQTAs. The Proposed Project would include a mix of land uses including residential and commercial that would concentrate opportunities to live and work in an HQTAs, resulting in increased mobility and accessibility for tenants and residents as well as surrounding neighborhoods. The Proposed Project would serve nearby activity centers and commercial corridors within this community. As part of the Proposed Project, pedestrian paths and bicycle parking within the Development Site would be provided to promote access through the Project Site, which would provide direct access from the surrounding roadways. The Proposed pedestrian paseo would provide direct pedestrian access to connect S. Ogden Drive to the surface parking lot of the Center that is not provided under existing conditions. The Proposed Project would provide vehicle and bicycle parking pursuant to the LAMC, which would support mobility and accessibility to the Project Site. As such, the Proposed Project would support this goal.</p>
<p><b>2016-2040 RTP/SCS Goal 3</b> Ensure travel safety and reliability for all people and goods in the region.</p>	<p><b>No Conflict.</b> The Proposed Project would comply with LAMC and LADOT standards for Project Site access. Further, the Proposed Project would be subject to the site plan review requirements of the City of Los Angeles and would work with the Department of Building and Safety and the Los Angeles Fire Department to ensure that all access roads, driveways and parking areas would not create a design hazard to local roadways. As such, the Proposed Project would support this goal.</p>

**Table IV.C-6  
Consistency Analysis with the  
2016-2040 Regional Transportation Plan / Sustainable Community Strategy**

Goals and Policies	Consistency Assessment
<p><b>2016-2040 RTP/SCS Goal 6</b> Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).</p>	<p><b>No Conflict.</b> As discussed in Section IV.A, Air Quality, the Proposed Project would result in a less than significant impact regarding air quality during construction and operation, and would not exceed the regional and localized thresholds for the six criteria pollutants.</p> <p>As discussed under Goal 1, the Proposed Project would support pedestrian and bicycle activity in the Project Site vicinity by providing direct bicycle/pedestrian access to the Project Site. The Proposed Project would provide approximately 257 bicycle parking spaces, consistent with the LAMC requirements.</p> <p>Further, the Proposed Project’s mixed-use nature would promote bicycling and walking through the Project Site and along the adjacent commercial corridors. The Project’s mixed-use nature would also provide employment and patronage opportunities on-site, which may support the residents on-site and reduce vehicles-per-miles traveled. The Proposed Project is located near 13 local and inter-city transit lines and the planned Purple Line Extension, which would further support pedestrian activity. As such, the Proposed Project would support active transportation and improve air quality.</p>
<p><b>2016-2040 RTP/SCS Goal 7</b> Actively encourage and create incentives for energy efficiency, where possible.</p>	<p><b>No Conflict.</b> The Proposed Project would comply with applicable provisions of the City of Los Angeles Green Building Code and the California Green Building Code, which would require the implementation of energy efficient components and provide credits or incentives for the implementation of components in excess of what is currently required.</p>
<p><b>2016-2040 RTP/SCS Goal 8</b> Encourage land use and growth patterns that facilitate transit and active transportation.</p>	<p><b>No Conflict.</b> The Proposed Project is currently developed with five commercial buildings and is currently only accessible by vehicles and pedestrians traveling along W. 3<sup>rd</sup> Street S. Fairfax Avenue, and S. Ogden Street. Thirteen bus lines operate in the vicinity of the Project Site.</p> <p>The Proposed Project would open the Project Site to active transportation. The Proposed Project would provide direct pedestrian and bicycle entrances from W. 3<sup>rd</sup> Street and S. Fairfax Avenue. The new commercial/retail uses in the mixed-use building would directly front W. 3<sup>rd</sup> Street. General vehicle access to the Project Site would be provided from S. Fairfax Avenue and S. Ogden Drive, which would lead directly into the surface parking areas and the on-site parking structure.</p> <p>The Proposed Project’s mixed-use oriented design, active transportation amenities and facilities, and proximity to mass transit would promote active transportation and transit use. The Proposed Project is also within walking distance to commercial uses along W. 3<sup>rd</sup> Street and S. Fairfax Avenue.</p>
<p><b>2016-2040 RTP/SCS Land Use Policy 3</b> Develop “Complete Communities.”</p>	<p><b>No Conflict.</b> SCAG describes the development of “complete communities.” The 2016-2040 RTP/SCS supports the creation of these districts through a concentration of activities with housing, employment, and a mix of retail and services, located</p>

**Table IV.C-6  
Consistency Analysis with the  
2016-2040 Regional Transportation Plan / Sustainable Community Strategy**

Goals and Policies	Consistency Assessment
	<p>in close proximity to each other, where most daily needs can be met within a short distance of home, providing residents with the opportunity to patronize their local area and run daily errands by walking or cycling rather than traveling by automobile.<sup>98</sup></p> <p>As stated above, the Proposed Project includes the development of a mixed-use project, with residents in close proximity to employment and patronage opportunities. Further, the Proposed Project is within walking distance of commercial uses along W. 3<sup>rd</sup> Street and S. Fairfax Avenue and bus lines that operate in the Project area. The Project would increase the connectivity of the Project Site with the surrounding community with direct pedestrian and bicycle access. The Proposed Project would further provide commercial uses and passive landscaping with seating areas, which would provide safe access that promotes pedestrian activity, especially along W. 3<sup>rd</sup> Street.</p>
<p><b>2016-2040 RTP/SCS Land Use Policy 5</b> Plan for additional housing and jobs near transit.</p>	<p><b>No Conflict.</b> As discussed within this table, the Proposed Project includes a mixed-use development, which would place housing and jobs opportunities on the same Project Site and in close proximity to an existing residential neighborhood. Additionally, the Proposed Project would support pedestrian and bicycle mobility by providing direct access to the Project Site and bicycle parking facilities in accordance with the LAMC. The Project area is also served by a total of 12 bus lines, including two Metro Rapid bus line (705 and 780), nine Metro Local Bus lines (14, 16, 17, 316, 105, 212, 312, 217, and 218), one LADOT DASH line (DASH Fairfax) and the planned Purple Line Extension.</p>
<p><b>2016-2040 RTP/SCS Land Use Policy 6</b> Plan for changing demand in types of housing.</p>	<p><b>No Conflict.</b> The Proposed Project would provide 331 multi-family units within a mixed-use development within the City of Los Angeles. The multi-family units would aid the City in meeting the changing demand for housing types by providing units within walking distance of employment and patronage opportunities and transit options. The Proposed Project includes 70 studio, 162 one-bedroom, 66 two-bedroom and 33 3-bedroom units, which would provide a range of housing choices and would be available to all persons, including existing employees and residents in the project area.</p>
<p><b>2016-2040 RTP/SCS Land Use Policy 7</b> Continue to protect stable, existing single-family areas.</p>	<p><b>No Conflict.</b> The Proposed Project would not demolish any existing single-family homes. The Project Site is currently developed with commercial uses.</p>
<p><b>2016-2040 RTP/SCS Land Use Policy 8</b> Ensure adequate access to open space and preservation of habitat.</p>	<p><b>No Conflict.</b> The Proposed Project is located within an urbanized area within the City of Los Angeles. Development of the Proposed Project would not remove any existing open space areas or habitat, since the Project Site is fully developed with industrial uses. The Proposed Project would provide</p>

<sup>98</sup> SCAG, 2016-2040 RTP/SCS, April 2016 (page 79).

**Table IV.C-6  
Consistency Analysis with the  
2016-2040 Regional Transportation Plan / Sustainable Community Strategy**

Goals and Policies	Consistency Assessment
	approximately 37,225 square feet of open space that exceeds the required amount pursuant to the LAMC.
<i>Source: Southern California Association of Governments, 2016-2040 RTP/SCS, April 2016.</i>	

*(c) Consistency with the Sustainable City pLAN and the L.A. New Green Deal*

The 2019 L.A. New Green Deal is the first four-year update to the Sustainable City pLAN. It augments, expands, and elaborates in more detail the City’s vision for a sustainable future and it addresses the climate emergency with accelerated targets and new aggressive goals. The Project will contribute towards the attainment of the aspirations and goals previously identified in the Regulatory Framework discussion above by:

- Obtaining power from a utility provider that supplies 55% renewable energy by 2025.
- Including components that will reduce building energy use per square foot 22% by 2025.
- Reducing Vehicle Miles Traveled per capita by at least 13% by 2025.
- Ensuring 57% of new housing units are built within 1,500 feet of transit.

The Proposed Project would use energy from the Los Angeles Department of Water and Power (LADWP), which currently provides 32 percent of electricity via renewable sources but has committed to providing an increasing percentage from renewable sources that exceed the RPS requirements by providing 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036.<sup>99</sup> The Proposed Project would be designed and constructed to meet LA Green Building Code standards, where applicable, by including several measures designed to reduce energy consumption. The Proposed Project includes ENERGY STAR-rated appliances within the dwelling units and would be a modern development with energy efficient boilers, heaters and air conditioning systems. As such, the Proposed Project would be consistent with the goals and initiatives in the L.A. Green New Deal.

<sup>99</sup> Los Angeles Department of Water and Power, 2016 Power Integrated Resource Plan, page ES- 1.

## (2) Quantification of GHG Emissions

### (a) Construction Emissions

Pursuant to SCAQMD methodology, the construction-related GHG emissions have been amortized over a 30-year term and factored into the Proposed Project's operational emissions.

Construction emissions represent an episodic, temporary source of GHG emissions. Emissions are generally associated with the operation of construction equipment and the disposal of construction waste. To be consistent with SCAQMD guidance for calculating criteria pollutants from construction activities, only GHG emissions from on-site construction activities, off-site hauling, and construction worker commuting are considered as project-generated. Due to the speculative nature of quantifying emissions from the off-site manufacture and transport of construction materials and prefabricated building components they were not addressed in this analysis.<sup>100</sup> CEQA does not require an evaluation of speculative impacts (CEQA Guidelines Section 15145). Therefore, the construction analysis does not consider such GHG emissions.

The Proposed Project would involve the demolition of the approximately 151,048 square feet of existing commercial buildings and new construction of an approximately 426,994 square-foot, mixed-use commercial and residential development.

The Proposed Project is anticipated to be built over 32.5 months, and be operational by 2023. Construction activities would include: pre-construction abatement activities, demolition of the existing buildings and removal of the existing surface parking lot, grading/excavation, and building construction for the new mixed-use development, including the residential mid-rise building with ground floor retail uses, parking structure, architectural finishing, and paving. Demolition activities are anticipated to start no sooner than early 2021, and construction completion and building occupancy is anticipated in 2023. Construction would consist of site preparation and demolition (2.6 months), grading/excavation (3 months), building construction (22 months), and finishing (4 months), and paving (0.5 months). The Proposed Project is estimated to require a net export of approximately 13,986 cubic yards (cy) of building demolition debris, 1,300 cy of asphalt debris, and 110,000 cubic yards of soil.

Emissions of GHGs were calculated using CalEEMod *Version 2016.3.2* for each phase and each year of construction of the Proposed Project and for the oil well abandonment.

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<sup>100</sup> *This methodology is consistent with the recommendations of the California Air Pollution Control Officers Association (CAPCOA), CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).*

The results of this analysis are presented in Table IV.C-7, Proposed Project Construction-Related GHG Emissions. As shown in Table IV.C-7, below, the total amount of construction-related GHG emissions from Project construction is approximately 2,670 MTCO<sub>2e</sub>. As discussed under the Methodology subsection above, the total construction emissions are amortized over 30 years and are incorporated into the proposed Project's annualized operational emissions. Thus the 2,670 MTCO<sub>2e</sub> of construction emissions equates to 89 MTCO<sub>2e</sub> per year during the life of the Project.

**Table IV.C-7**  
**Proposed Project Construction-Related GHG Emissions**

Year	CO <sub>2e</sub> Emissions (Metric Tons per Year)
2021	1,288
2022	893
2023	489
<b>Total Construction GHG Emissions:</b>	<b>2,670</b>
<b>Amortized Construction Emissions (30-years)</b>	<b>89</b>
<i>Source: CalEEMod Version 2016.3.2., Parker Environmental Consultants, 2020. Calculation data and results are provided in Appendix E, Greenhouse Gas Emissions Calculations Worksheets.</i>	

*(b) Operational Emissions*

The GHG emissions resulting from operation of the Proposed Project, which would involve the use of on-road mobile vehicles, electricity, natural gas, water, landscape equipment and generation of solid waste and wastewater, was estimated in consideration of the Proposed Project's design features, locational characteristics, and compliance with applicable regulatory measures.

For purposes of demonstrating the Proposed Project's consistency with SB32 and the State's goals for reducing GHG emissions, the Proposed Project's GHG emissions were quantified using the CalEEMod program to reflect the Proposed Project being an infill development, providing increased density in a walkable urban center with accessibility to transit, the pre-installation of energy efficient ENERGY STAR-rated appliances, meeting applicable water conservation requirements of the L.A. Green Building Code, meeting the applicable provisions of the California Energy Code, and complying with the construction and demolition solid waste handling and diversion requirements mandated in Section 66.32 of the LAMC.

As shown in Table IV.C-8, below, the Proposed Project's annual net generation of GHG emissions is estimated to be 3,384 MTCO<sub>2e</sub> per year.

**Table IV.C-8  
Annual Operational Greenhouse Gas Emissions**

Emissions Source	Project Generated CO <sub>2e</sub> Emissions (Metric Tons per Year)	Project-Generated CO <sub>2e</sub> Emissions with GHG Reduction Measures (Metric Tons per Year)	Percent Reduction
Area	112	6	95
Energy	3,967	3,158	20
Mobile (Motor Vehicles)	11,056	7,146	35
Stationary	9	9	0
Waste	307	77	75
Water	371	297	20
Construction Emissions <sup>a</sup>	89	89	0
<b>Subtotal:</b>	<b>15,911</b>	<b>10,782</b>	<b>32</b>
<i>Less Existing Development Site Uses:</i>	-7,398	-7,398	
<b>Project NET TOTAL:</b>	<b>8,513</b>	<b>3,384</b>	<b>60</b>
<i>Notes:</i>			
<sup>a</sup> The total construction GHG emissions were amortized over 30 years and added to the operation of the Proposed Project.			
<sup>b</sup> The Proposed Project's CalEEMod worksheets were based on the default 2016 Title 24 Energy Use Standards. Therefore the Proposed Project's Energy Use emissions were reduced by 20 % to account for compliance with the 2019 Title 24 Energy Conservation Standards.			
Source: CalEEMod Version 2016.3.2. Calculation data and results provided in Appendix E, Greenhouse Gas Emissions Calculations Worksheets, Parker Environmental Consultants, 2020.			

(i) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. As shown in Table IV.C-8, the Proposed Project, at full buildout, is expected to result in a net increase of 6 MTCO<sub>2e</sub> per year from area sources. The Proposed Project's area source GHG emissions takes into account PDF-GHG-1, which prohibits fireplaces within the residential units. Implementation of this project design feature would reduce the Project's area source GHG emissions by 106 MTCO<sub>2e</sub> per year. Without this feature, the total GHG emissions generated by the Proposed Project's area sources would be 112 MTCO<sub>2e</sub> per

year. See Appendix E to this Draft EIR for the supporting calculations that reflect the emission reduction measures.

(ii) *Electricity and Natural Gas Generation Emissions*

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO<sub>2</sub> and other GHGs directly into the atmosphere. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors depending on the utility company that would serve the Project Site. 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. However, they conservatively do not account for SB 100 RPS requirements for renewable energy.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by 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. The data are specific for climate zones; therefore, Climate Zone 11 was selected for the Development Site based on the CalEEMod User Guide Appendix F, Climate Zone Lookup tool. Since these studies are based on older buildings, CalEEMod provides adjustments to account for more stringent requirements under 2016 Title 24 building codes. As discussed above, the Proposed Project would be subject to the more stringent 2019 Title 24 standards. Residential and nonresidential buildings built in compliance with the 2019 standards will use about 30 to 53 percent less energy than those under the 2016 standards. This analysis is conservatively based on the CalEEMod's default energy use data to account for compliance with 2016 Title 24 standards. A reduction of 20% in the building's energy use was applied to the Proposed Project scenario to capture the energy savings associated with the migration from 2016 Title 24 standards to 2019 Title 24 standards.

The Proposed Project would implement a number of code compliance features that would further reduce the Proposed Project's energy consumption. Specifically, as required by the LA Green Building Code, pre-installed appliances such as clothes washers, dishwashers, and fans are required to be Energy-Star rated, which would further reduce overall energy usage.

As shown in Table IV,C-8, the Proposed Project's GHG emissions from electricity and natural gas energy usage would result in a total of 3,158 MTCO<sub>2</sub>e per year, which accounts for a reduction of 809 MTCO<sub>2</sub>e per year.

*(iii) Mobile Source Emissions*

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

Mobile source operational GHG emissions were calculated using CalEEMod based on the Project VMT generation estimates provided by the Linscott, Law and Greenspan. As discussed in Section I, Transportation, to this Draft EIR, Project VMT was calculated using the LADOT VMT Calculator.

The Proposed Project would develop new residential uses on a site that is within an HQTAs and would reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. The increase in bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Development Site with existing streets to encourage people to walk instead of drive.

As shown in Table IV.C-8, Project GHG emissions from mobile sources would result in a net increase of 7,146 MTCO<sub>2</sub>e per year. When accounting for the incorporation of VMT reductions associated with the Project's mix of commercial and residential land uses (i.e., internal capture), density of development, accessibility to transit (transit reductions) and the Proposed Project's TDM measures (as identified in Section IV.I, Transportation), the Proposed Project's mobile source GHG emissions would be reduced by 3,910 MTCO<sub>2</sub>e per year.

The Proposed Project is a mixed-use high-density redevelopment project with residential and commercial uses located in an urbanized portion of the Wilshire Community Plan near mass transit and a broad mix of land uses. As noted in Section IV.I, Transportation, the Proposed Project's estimated annual VMTs are based on LADOT's VMT Calculator's

mixed-use methodology which reflects a reduction in the total daily trips based on several project defining factors including: the density of development, the relative numbers of residents and jobs, connectivity for walking and proximity to transit. Further, the average trip length used to calculate VMTs is based on the specific traffic analysis zone (TAZ) that reflects the attributes associated with the project's location and surrounding land uses (i.e., intersections per square mile, population and employment within one mile, employment within 30 minutes by transit, vehicles per household, and travel demand). These features are inherently accounted for in the Project's VMT calculations and reflect a reduction in total VMT (and thus decrease in fuel consumption) as compared to a standard project that does not provide a complementary mix of land uses and is not located within a transit oriented community or high quality transit area. In addition, the Proposed Project VMT calculation accounts for implementation of the TDM mitigation measures discussed in Section IV.I, Transportation.<sup>101</sup>

Based on these factors, the Proposed Project would be consistent with the intent of both AB 32 and SB 375 with respect to reducing mobile source emissions associated with VMT.

(iv) *Stationary Source Emissions*

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Proposed Project would include an emergency generator on-site. As shown in Table IV.C-8, emissions from stationary sources would be approximately 9 MTCO<sub>2e</sub> per year.

(v) *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-8, the Proposed Project's GHG emissions from solid waste generation would result in a total of 77 MTCO<sub>2e</sub> per year which accounts for a 230 MTCO<sub>2e</sub> per year reduction in GHG emissions attributable to

<sup>101</sup> *Mitigation measure MM-TRAFFIC-1 in Section I, Transportation, of this Draft EIR, would require the Proposed Project to incorporate TDM strategies to reduce Household VMT per capita to below the City's thresholds. The incorporation of these TDM strategies would reduce average weekday vehicle trips from 6,571 trips to 6,143 trips, and would result in an approximate reduction of 1,154,625 VMTs per year as compared to the Proposed Project without mitigation. This reduction in VMT would further reduce the Proposed Project's mobile source GHG emissions by 480 MTCO<sub>2e</sub> resulting in a total of 4,174 MTCO<sub>2e</sub>.*

the Project's compliance with the City's solid waste reduction policies and code requirements to implement on-site recycling measures.

(vi) *Water Usage and Wastewater Generation Emissions*

GHG emissions are related to the energy used to convey, treat, distribute water, and treat wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider.

In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen, 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code, and reflect an approximately 20 percent reduction as compared to the base demand. As shown in Table IV.C-8, the Proposed Project's GHG emissions from water/wastewater usage would result in a total of 297 MTCO<sub>2e</sub> per year.

The Proposed Project would incorporate components that are compliant with existing regulations such as the pre-installation of energy efficient ENERGY STAR-rated appliances, meeting applicable water conservation requirements of the L.A. Green Building Code, meeting the applicable provisions of the California Energy Code, and complying with the construction and demolition solid waste handling and diversion requirements mandated in Section 66.32 of the LAMC, that would further reduce the carbon footprint of the development.

In addition to the GHG emission reductions described above, it is important to note that 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 compared to those that would exist if the project were not implemented. The analysis of the Project's GHG emissions is conservative in that it assumes all of the estimated GHG emissions are new additions to the atmosphere.

(c) *Post-2030 Considerations*

SB 32 was passed on September 8, 2016, which would require Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030 and includes various strategies to meet that goal. The Project's design features advance these goals by reducing VMT, and reducing GHGs through energy efficient building systems.

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

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail."

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's net emissions level (4,654 metric tons of CO<sub>2</sub>e per year) to decline as the regulatory initiatives identified by CARB in the First Update are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table IV.C-8, above, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year (2050) goal. Further, the Project's consistency with SCAG's 2016–2040 RTP/SCS demonstrates that the Project will be consistent with post-2020 GHG reduction goals.

The Project is the type of land use development that is encouraged by the 2016–2040 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. As

shown above, the Project would be consistent with the reduction in transportation emissions per capita provided in the 2016 RTP/SCS and the updated SB 375 targets. As described above, the 2016 RTP/SCS establishes a regulatory framework for achieving GHG levels per capita relative to 2005 emissions would be reduced by 8 percent in 2020, 18 percent in 2035, and 21 percent in 2040 in the SCAG region, which would exceed CARB's required reduction targets. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2020 and beyond. For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

***Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be less than significant.***

### (3) Mitigation Measures

The Proposed Project's impacts would be less than significant. Therefore, no mitigation measures are warranted.

### (4) Level of Significance After Mitigation

The Proposed Project's impacts related to GHG emissions were determined to be less than significant without mitigation.

## 4. Cumulative Impacts

A cumulatively considerable impact would occur where the impact of the Proposed Project in addition to the related projects would be significant. However, in the case of global climate change, the proximity of the Proposed Project to other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. As explained earlier, the analysis of a project's GHG emissions is inherently a cumulative analysis because climate change is a global issue and the emissions from individual projects are negligible in a global context. Accordingly, the analysis above takes into account the potential for the Proposed Project to contribute to a cumulative impact of global climate change. According to CAPCOA,

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“GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.”<sup>102</sup>

The analysis above shows that the Proposed Project is consistent with the original 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 Proposed Project is also consistent with the RTP/SCS’s regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. In addition, the Proposed Project would generally comply with the aspirations of the Sustainable City pLAN/L.A.’s Green New Deal, which includes specific targets related to housing and development, and mobility and transit. Given the Proposed Project’s consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions, it is concluded that the Proposed Project’s incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. The analysis of the Proposed Project’s impact is a cumulative analysis, and no further discussion is required given that the analysis above found that the Proposed Project’s GHG impacts would be less than significant.

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<sup>102</sup> *California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.*