

## 3.7 Greenhouse Gas Emissions

This section presents the Proposed Project's greenhouse gas (GHG) emissions. The section contains: (1) a description of the local setting of the Project Site and surrounding areas to establish baseline conditions; (2) a summary of the relationship between GHG emissions and global climate change; (3) an overview of applicable regulations related to GHG emissions; (4) an assessment of current GHG emissions at the City, State, National and Global levels; (5) a quantitative analysis of future GHG emissions associated with construction and operation of the Proposed Project; and (6) an analysis of the consistency of the Proposed Project with applicable regulations, plans, and policies to reduce GHGs as set forth by the State of California, South Coast Air Quality Management District (SCAQMD), Southern California Association of Governments (SCAG) and the City of Inglewood (City).

Comments received in response to the NOP for the EIR regarding GHG emissions can be found in Appendix B. Any applicable issues and concerns regarding potential impacts related to greenhouse gas emissions as a result of implementation of the Proposed Project are analyzed within this section.

The analysis included in this section was developed based on Project-specific construction and operational features described in Chapter 2, Project Description.

### 3.7.1 Environmental Setting

#### GHG Fundamentals

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. The extent to which increased concentrations of GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are compounds in the Earth's atmosphere that play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy that otherwise is radiated back from the Earth towards space, resulting in a warming of the atmosphere.

Not all GHGs possess the same capacity to induce atmospheric warming; as a result, the warming contribution of a GHG is commonly quantified in the common unit of carbon dioxide equivalent

(CO<sub>2</sub>e) over a 100-year period, by applying the appropriate global warming potential (GWP) value.<sup>1</sup> By using the applicable GWP for each GHG, Project-related emissions can be tabulated in the common unit of metric tons per year CO<sub>2</sub>e. GWP ratios are provided by the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories were calculated using the GWPs from the IPCC's Second Assessment Report (SAR), published in 1996. The IPCC has since updated the GWP values based on the latest science in its Fourth Assessment Report (AR4)<sup>2</sup> and Fifth Assessment Report (AR5),<sup>3</sup> published in 2007 and 2014, respectively. California Air Resources Board (CARB) uses the AR4 GWPs in the statewide GHG emissions inventory,<sup>4</sup> in the current Climate Change Scoping Plan,<sup>5</sup> and in the current version of the California Emissions Estimator Model (CalEEMod)<sup>6</sup> that is used to calculate CO<sub>2</sub>e values for construction as well as operations for existing and Proposed Project build-out conditions. Compounds that are regulated as GHGs are discussed below.

**Carbon Dioxide (CO<sub>2</sub>):** CO<sub>2</sub> is the most abundant anthropogenic GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO<sub>2</sub> is the reference gas (GWP of 1) for determining the GWPs of other GHGs. CO<sub>2</sub> accounted for approximately 83 percent of anthropogenic GHG emissions (CO<sub>2</sub>e) in California in 2016.

**Methane (CH<sub>4</sub>):** CH<sub>4</sub> is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, anaerobic decomposition of organic matter in landfills, manure management, and leaks in natural gas pipelines. The GWP of CH<sub>4</sub> is 25 in the IPCC AR4. CH<sub>4</sub> accounted for approximately 9 percent of anthropogenic GHG emissions (CO<sub>2</sub>e) in California in 2016.

**Nitrous Oxide (N<sub>2</sub>O):** N<sub>2</sub>O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N<sub>2</sub>O is 298 in the IPCC AR4. N<sub>2</sub>O emissions accounted for approximately 3 percent of anthropogenic GHG emissions (CO<sub>2</sub>e) in California in 2016.

---

<sup>1</sup> GWPs 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 GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). The California Air Resources Board (CARB) reports GHG emission inventories for California using the GWP values from the IPCC AR4.

<sup>2</sup> Intergovernmental Panel on 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*. Available: <https://www.ipcc.ch/assessment-report/ar4/>. Accessed March 10, 2019.

<sup>3</sup> Intergovernmental Panel on 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*. Available: [www.ipcc.ch/report/ar5/syrhttps://](http://www.ipcc.ch/report/ar5/syrhttps://). Accessed March 10, 2019.

<sup>4</sup> California Air Resources Board, 2018. California Greenhouse Gas Emission Inventory - 2018 Edition. 2016 Inventory Documentation. Available: [ HYPERLINK "https://www.arb.ca.gov/cc/inventory/data/data.htm.%20Accessed%20February%208" ], 2019.

<sup>5</sup> California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target*. Available: [www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](http://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf). Accessed March 9, 2019. November, 2017.

<sup>6</sup> Version 2016.3.1, available at [www.caleemod.com](http://www.caleemod.com).

**Hydrofluorocarbons (HFCs):** HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWPs of HFCs range from 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4. HFCs and PFCs (see below) combined accounted for approximately 5 percent of anthropogenic GHG emissions (CO<sub>2</sub>e) in California in 2016.

**Perfluorocarbons (PFCs):** PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 7,390 to 17,700 in the IPCC AR4.

**Sulfur Hexafluoride (SF<sub>6</sub>):** SF<sub>6</sub> is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF<sub>6</sub> has a GWP of 22,800 in the IPCC AR4. SF<sub>6</sub> emissions accounted for less than 1 percent of anthropogenic GHG emissions (CO<sub>2</sub>e) in California in 2016.

## Effects of Global Climate Change

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 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 and inability to accurately model the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report (AR5)* states that it is extremely likely that the dominant cause of the observed warming since the mid-20th century is the anthropogenic increase in greenhouse gas concentrations.<sup>7</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>8</sup>

The Fourth California Climate Change Assessment (Fourth Assessment), published in 2018, found that the potential impacts in California due to global climate change include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more extreme forest fires; more severe droughts punctuated by extreme precipitation events; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and

<sup>7</sup> Intergovernmental Panel on 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*. Available: [www.ipcc.ch/report/ar5/syrhttps://](http://www.ipcc.ch/report/ar5/syrhttps://). Accessed March 10, 2019.

<sup>8</sup> Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, 2010. Expert Credibility in Climate Change, *Proceedings of the National Academy of Sciences of the United States of America*. 2010;107:12107-12109.

associated levee systems; and increased pest infestation.<sup>9</sup> The Fourth Assessment's findings are consistent with climate change studies published by the California Natural Resources Agency (CNRA) since 2009, starting with the *California Climate Adaptation Strategy*<sup>10</sup> as a response to the Governor's Executive Order S-13-2008. In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan*.<sup>11</sup> The 2018 update to *Safeguarding California Plan* identifies hundreds of ongoing actions and next steps state agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations.<sup>12</sup>

In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying a lead agency to lead adaptation efforts in each sector. In accordance with the 2009 *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers. The website, known as Cal-Adapt, became operational in 2011.<sup>13</sup> The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios comprised of local average values for temperature, sea level rise, snowpack and other data representative of a variety of models and scenarios, including potential social and economic factors.

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.

### **Temperature Increase**

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. The impact of human activities on global temperature is readily apparent in the observational record. Since 1895, the contiguous US has observed an average temperature increase of 1.5°F per century. The last five-year period (2014–2018) is the warmest on record for the contiguous US,<sup>14</sup> while the 20 warmest years have occurred over the past 22-year period.<sup>15</sup>

The Fourth Assessment indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions (OPR et al,

<sup>9</sup> California Governor's Office of Planning and Research (OPR), Scripps Institution of Oceanography, CEC, California Public Utilities Commission. 2018. *Statewide Summary Report. California's Fourth Climate Change Assessment*. Publication number: SUMCCCA4-2018-013. Available: [ HYPERLINK "http://www.climateassessment.ca.gov/state/docs/20190116-StatewideSummary.pdf" ]. Accessed March 11, 2019.

<sup>10</sup> California Natural Resources Agency, 2009. *2009 California Climate Adaptation Strategy*. Available: [ HYPERLINK "http://resources.ca.gov/climate/safeguarding" ]. Accessed March 10, 2019.

<sup>11</sup> California Natural Resources Agency, 2014. *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. July 2014.

<sup>12</sup> California Natural Resources Agency, 2018. *Safeguarding California Plan: 2018 Update*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. January 2018.

<sup>13</sup> The Cal-Adapt website address is: [ HYPERLINK "http://cal-adapt.org" ]. Accessed March 10, 2019.

<sup>14</sup> NOAA, Assessing the US Climate in 2018. <https://www.ncei.noaa.gov/news/national-climate-201812>. Accessed: April 25, 2019. Published February 6, 2019.

<sup>15</sup> Climate Central, 2019. Available at: [ HYPERLINK "https://www.climatecentral.org/gallery/maps/2018-global-temp-review-land-ocean" ]. Accessed April 25, 2019. Published February 6, 2019.

2018). According to the Cal-Adapt website, the portion of the State in which the Project Site is located could result in an average increase in temperature of approximately 4.2° to 6.9°F by 2070-2090, compared to the baseline period of 1961-1990.

With climate change, extreme heat conditions and heat waves are predicted to impact larger areas, last longer, and have higher temperatures. Heat waves, defined as three or more days with temperatures above 90°F, are projected to occur more frequently by the end of the century. Extreme heat days and heat waves can negatively impact human health. Heat-related illness includes a spectrum of illnesses ranging from heat cramps to severe heat exhaustion and life-threatening heat stroke.<sup>16</sup>

### **Wildfires**

The expected hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. By 2100, if GHG emissions continue to rise, one study found that the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and that average area burned statewide would increase by 77 percent by the end of the century. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease.<sup>17</sup>

### **Air Quality**

Higher temperatures, conducive to air pollution formation, could worsen air quality in California and make it more difficult for the state to achieve air quality standards. Climate change may increase the concentration of ground-level ozone in particular, which can cause breathing problems, aggravate lung diseases such as asthma, emphysema, and chronic bronchitis, and cause chronic obstructive pulmonary disease (COPD). but the magnitude of the effect, and therefore, its indirect effects, are uncertain. Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds.<sup>18</sup> 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>19</sup>

### **Precipitation and Water Supply**

There is a high degree of uncertainty with respect to the overall impact of global climate change on future water supplies in California. Studies indicate considerable variability in predicting

<sup>16</sup> California Environmental Protection Agency, 2013. *Preparing California for Extreme Heat: Guidance and Recommendations*. Available: <https://toolkit.climate.gov/reports/preparing-california-extreme-heat-guidance-and-recommendations>. Accessed March 10, 2019. October 2013.

<sup>17</sup> Westerling, Anthony LeRoy. (2018). *Wildfire Simulations for the Fourth California Climate Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate*. California's Fourth Climate Change Assessment, California Energy Commission. Publication number: CCCA4-CEC-2018-014.

<sup>18</sup> Kenward, A, et al. (2013). *Wildfires and Air Pollution: The Hidden Health Hazards of Climate Change*. Climate Central. Available at: [ HYPERLINK "<http://assets.climatecentral.org/pdfs/WildfiresAndAirPollution.pdf>" ]. Accessed April 11, 2019.

<sup>19</sup> California Environmental Protection Agency, 2013. *Preparing California for Extreme Heat: Guidance and Recommendations*. Available: <https://toolkit.climate.gov/reports/preparing-california-extreme-heat-guidance-and-recommendations>. Accessed March 10, 2019. October 2013.

precise impacts of climate change on California hydrology and water resources. Increasing uncertainty in the timing and intensity of precipitation will challenge the operational flexibility of California's water management systems. 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>20</sup>

### **Hydrology and Sea Level Rise**

As discussed above, climate changes 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.<sup>21</sup>

### **Agriculture**

California has a massive agricultural industry that represents 11.3 percent of total US agricultural revenue. Higher CO<sub>2</sub> levels can stimulate plant production and increase plant water-use efficiency. However, a changing climate presents significant risks to agriculture due to "potential changes to water quality and availability; changing precipitation patterns; extreme weather events including drought, severe storms, and floods; heat stress; decreased chill hours; shifts in pollinator lifecycles; increased risks from weeds, pest and disease; and disruptions to the transportation and energy infrastructure supporting agricultural production"<sup>22</sup>

### **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. Increased concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation.<sup>23</sup> Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more

---

<sup>20</sup> California Natural Resources Agency, 2014. *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. July 2014.

<sup>21</sup> California Natural Resources Agency, 2014. *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. July 2014.

<sup>22</sup> California Natural Resources Agency, 2014. *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. July 2014.

<sup>23</sup> National Research Council, 2010. *Advancing the Science of Climate Change*. Available: [ HYPERLINK "<http://dels.nas.edu/resources/static-assets/materials-based-on-reports/reports-in-brief/Science-Report-Brief-final.pdf>" ]. Accessed March 11, 2019.

frequent. Sea level could rise as much as two feet along most of the US coastline. With climate change, ecosystems and wildlife will be challenged by the spread of invasive species, barriers to species migration or movement in response to changing climatic conditions, direct impacts to species health, and mismatches in timing between seasonal life-cycle events such as species migration and food availability.<sup>24</sup>

## Existing Conditions

### **California Greenhouse Gas Emissions Inventory**

CARB compiles GHG inventories for the State. Based on the 2016 GHG inventory data (i.e., the latest year for which data are available from CARB) prepared by CARB in 2018, California emitted 429.4 million metric tons of CO<sub>2</sub>e (MMTCO<sub>2</sub>e) including emissions resulting from imported electrical power.<sup>25</sup> Between 1990 and 2016, the population of California grew by approximately 9.4 million (from 29.8 to 39.2 million).<sup>26</sup> This represents an increase of approximately 31 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from \$773 billion in 1990 to \$2.62 trillion in 2016 representing an increase of approximately 239 percent (just over three times the 1990 gross state product).<sup>27</sup> Despite the population and economic growth, CARB's 2016 Statewide inventory indicated that California's net GHG emissions in 2016 were just below 1990 levels, which is the 2020 GHG reduction target codified in California Health and Safety Code (HSC), Division 25.5, also known as The Global Warming Solutions Act of 2006 (AB 32). **Table 3.7-1, *State of California GHG Emissions***, identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2016. As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at approximately 39 percent in 2016.

<sup>24</sup> California Natural Resources Agency, 2014. *Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy*. Available: <http://resources.ca.gov/climate/safeguarding/>. Accessed March 10, 2019. July 2014.

<sup>25</sup> California Air Resources Board, 2018. California Greenhouse Gas 2000-2016 Inventory by Scoping Plan Category – Summary. Available: [https://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_sum\\_2000-16.pdf](https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-16.pdf). Accessed March 10, 2019. June 22, 2018.

<sup>26</sup> California Department of Finance, 2019. E-5 Population and Housing Estimates for Cities, Counties and the State. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/>. Accessed February 8, 2019.

<sup>27</sup> California Department of Finance, 2018. Gross State Product. Available: [http://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross\\_State\\_Product/](http://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/). Accessed February 8, 2019. Amounts are based on current dollars as of the date of the report (May 2018).

**TABLE 3.7-1  
 STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS**

Category	Total 1990 Emissions using IPCC SAR (MMTCO <sub>2</sub> e)	Percent of Total 1990 Emissions	Total 2016 Emissions using IPCC AR4 (MMTCO <sub>2</sub> e)	Percent of Total 2016 Emissions
Transportation	150.7	[ =b3/b12*100 \# "0%" ]	169.4	39%
Electric Power	110.6	[ =b4/b12*100 \# "0%" ]	68.6	16%
Commercial Fuel Use	14.4	[ =b5/b12*100 \# "0%" ]	15.2	4%
Residential	29.7	[ =b6/b12*100 \# "0%" ]	24.2	6%
Industrial	103.0	[ =b7/b12*100 \# "0%" ]	89.6	21%
Recycling and Waste <sup>a</sup>	–	–	8.8	2%
High GWP/Non-Specified <sup>b</sup>	1.3	<1%	19.8	5%
Agriculture/Forestry	23.6	[ =b10/b12*100 \# "0%" ]	33.8	8%
Forestry Sinks	-6.7		-- <sup>c</sup>	--
<b>Net Total (IPCC SAR)</b>	<b>426.6</b>	<b>100% <sup>e</sup></b>	--	--
<b>Net Total (IPCC AR4) <sup>d</sup></b>	<b>431</b>	<b>100% <sup>e</sup></b>	<b>429.4</b>	<b>100% <sup>e</sup></b>

NOTES:

- <sup>a</sup> Included in other categories for the 1990 emissions inventory.
- <sup>b</sup> High GWP gases are not specifically called out in the 1990 emissions inventory.
- <sup>c</sup> Revised methodology under development (not reported for 2012).
- <sup>d</sup> California Air Resources Board (CARB) revised the State's 1990 level GHG emissions using GWPs from the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC AR4).
- <sup>e</sup> Total of individual percentages may not add up to 100% due to rounding

SOURCES:

CARB, 2017. 1990 to 2004 Inventory Data and Documentation. Available: [ HYPERLINK "https://www.arb.ca.gov/cc/inventory/1990level/1990data.htm" ]. Accessed: March 11, 2019;  
 CARB, 2018. California Greenhouse Gas 2000-2016 Inventory by Scoping Plan Category – Summary. Available: https://www.arb.ca.gov/cc/inventory/data/tables/ghg\_inventory\_scopingplan\_sum\_2000-16.pdf. Accessed: March 10, 2019.

### ***City of Inglewood Greenhouse Gas Emissions Inventory***

The South Bay Cities Council of Governments (SBCCOG) received funding from Southern California Edison's 2013-2014 Local Government Partnership Strategic Plan Pilots program to assist local governments within the South Bay sub-region perform inventories of local GHG emissions and develop GHG reduction programs and policies. As a member of the SBCCOG, the City collaborated with the SBCCOG to develop inventories of community-wide greenhouse gas emissions for the years 2005 and 2007.<sup>28</sup> Additionally, the City of Inglewood developed a community-wide inventory for 2010 as reported in the 2013 Inglewood Energy and Climate

<sup>28</sup> South Bay Cities Council of Governments, 2011. *City of Inglewood Community Greenhouse Gas Emissions Inventory Report*. Available: [ HYPERLINK "http://www.southbaycities.org/sites/default/files/documents/inventories/Inglewood\_Community\_Inventory.pdf" ]. Accessed March 10, 2019.

Action Plan.<sup>29</sup> **Table 3.7-2, City of Inglewood GHG Emissions by Sector: 2005 to 2010**, is a summary of the City’s emissions from each sector for the years 2005, 2007 and 2010 and the percent change from 2005 to 2010. As shown in Table 3.7-2, the City’s community and municipal GHG emissions decreased approximately 2.7 percent from 2005 to 2010, falling from 610,910 MTCO<sub>2e</sub> in 2005 to 594,273 MTCO<sub>2e</sub> in 2010.

**TABLE 3.7-2  
 CITY OF INGLEWOOD GHG EMISSIONS BY SECTOR: 2005 TO 2010 (MTCO<sub>2e</sub>)**

Sector	2005	2007	2010	2010 % of total	Percent Change (2005 to 2010)
Transportation	320,254	311,853	322,042	54.2%	+0.6%
Residential Energy	124,872	123,062	122,429	20.6%	-2.0%
Commercial/Municipal Energy	97,176	99,458	95,261	16.0%	-2.0%
Industrial Energy	34,940	31,272	26,100	4.4%	-25.3%
Solid Waste	19,855	16,841	16,448	2.8%	-17.2%
Water	13,813	13,272	11,993	2.0%	-13.2%
<b>Total</b>	<b>610,910</b>	<b>595,758</b>	<b>594,273</b>	<b>100%</b>	<b>-2.7%</b>

SOURCE: City of Inglewood, *Inglewood Energy and Climate Action Plan* (2013).

The City’s Community-wide emissions were categorized in six sectors: Transportation, Residential Energy, Commercial/Municipal Energy, Industrial energy, Solid Waste, and Water. The Municipal emissions were added as one sector.

- **Transportation** includes emissions from vehicles traveling (wholly or partially) within the City, and emissions from operating off-road vehicles and equipment (e.g., lawn and garden equipment, construction equipment, industrial equipment, and light commercial equipment).
- **Residential Energy** includes emissions from electricity and natural gas consumption in residential buildings.
- **Commercial/Municipal Energy** includes emissions from electricity and the on-site combustion of natural gas and fuel use in nonresidential buildings and city facilities (including outdoor lighting).
- **Industrial Energy** includes emissions from electricity and the on-site combustion of natural gas and fuel use in industrial buildings and facilities.
- **Solid Waste** includes emissions from solid waste that is generated in the community and sent to landfills.
- **Water** includes emissions from the electricity used to source, treat, and deliver imported water in the community that is not accounted for in the community utility data.

<sup>29</sup> City of Inglewood, 2013, *Inglewood Energy and Climate Action Plan*. Available: [ HYPERLINK "https://www.cityofinglewood.org/225/Sustainability" ]. Accessed Feb 15, 2019. March 2013.

As shown in Table 3.7-2, the transportation sector was the largest contributor to the most recent inventory (2010) at over 54 percent of the total. Residential Energy consumption is the second-largest contributor to emissions at 20.6 percent of the total, followed by Commercial/Municipal Energy (16 percent), Industrial Energy (4.4 percent), Solid Waste (2.8 percent), and Water (2 percent).

**Existing Project Site**

The entire Project Site is comprised of approximately 28 acres of land. All but six of the parcels that make up the Project Site are currently vacant. The vacant parcels within the Project Site total approximately 23 acres, or more than 85 percent of the Project Site. The six developed parcels include a fast-food restaurant, a motel, a light manufacturing/warehouse facility, a warehouse, a commercial catering business, and a groundwater well and related facilities.

GHG emissions are currently associated with vehicle trips to and from the existing land uses at the Project Site (on-road mobile sources), on-site combustion of natural gas for heating and cooking, on-site combustion emissions from landscaping equipment (area source), off-site combustion of fossil fuels for electricity, and off-site emissions from solid waste decomposition, water conveyance, and wastewater treatment. The estimated existing GHG emissions are summarized in **Table 3.7-3, Estimated GHG Emissions for Existing Site**. As shown, the primary sources of emissions are from transportation and energy demand (electricity and natural gas). Detailed emissions calculations are provided in Appendix D of this Draft EIR.

**TABLE 3.7-3  
 ESTIMATED GHG EMISSIONS FROM ACTIVITIES ON THE EXISTING SITE**

<b>Emissions Source</b>	<b>CO<sub>2</sub>e (Metric Tons per Year) <sup>a, b</sup></b>
Fast Food Restaurant	9,999
Motel	999
Manufacturing/Warehouse	999
Water Well	999
<b>Total Existing Site Emissions</b>	<b>9,999</b>

NOTES:

- <sup>a</sup> Totals may not add up exactly due to rounding in the modeling calculations.
- <sup>b</sup> CO<sub>2</sub>e emissions are calculated using the global warming potential values from the Intergovernmental Panel on Climate Change Fourth Assessment Report.

SOURCE: ESA, 2019

**Existing Uses Relocating to Project Site**

In addition to the actual LA Clippers games being relocated to the Project Site, the existing LA Clippers Team Offices, which are currently located at 1212 South Flower Street, Los Angeles, California, and the existing LA Clippers training center, which is located at 6854 South Centinela Avenue in Los Angeles, California, would be relocated to the Project Site upon completion of construction.

### 3.7.2 Adjusted Baseline Environmental Setting

As described in Chapter 3, Environmental Impacts, Settings, and Mitigation Measures, Section 3.7, Greenhouse Gas Emissions, assumes the Adjusted Baseline Environmental Setting. Analysis of GHG emissions is cumulative in nature because global climate change effects are caused by cumulative global emissions. Although the Hollywood Park Specific Plan Adjusted Baseline project that is included in the Adjusted Baseline Environmental Setting will be constructed and in operation prior to opening of the Proposed Project, its potential impact on global emissions is not relevant to the significance of emissions that would result from the Proposed Project. Thus, the Adjusted Baseline Environmental Setting is not relevant to the GHG impact analysis. No other changes to the existing environmental setting related to GHG emissions would occur under the Adjusted Baseline Environmental Setting.

### 3.7.3 Regulatory Setting

This section provides a summary of pertinent federal, State, and local GHG laws, executive orders, regulations, and policies.

#### Federal

##### ***US Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings***

In 2007, the US Supreme Court held that the United States Environmental Protection Agency (US EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, (127 S. Ct. 1438 (2007)), twelve states and cities, including California, together with several environmental organizations sued to require the US EPA to regulate GHGs as pollutants under the Federal Clean Air Act (CAA). The Supreme Court ruled that GHGs fit within the CAA’s definition of a pollutant and the US EPA had the authority to regulate GHGs.

On December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- ***Endangerment Finding:*** The current and projected concentrations of the six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>—in the atmosphere threaten the public health and welfare of current and future generations.
- ***Cause or Contribute Finding:*** The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

These findings did not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for motor vehicles.

### **Mandatory Greenhouse Gas Reporting Rule**

On September 22, 2009, the US EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule was a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the US EPA to develop "... mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy...." The Reporting Rule applied to most entities that emit 25,000 metric tons of CO<sub>2</sub>e or more per year at their facility from stationary sources. Starting in 2010, facility owners were required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandated recordkeeping and administrative requirements in order for the US EPA to verify annual GHG emissions reports.

### **Vehicle Emissions Standards**

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the US. Pursuant to the act, the US EPA and National Highway Traffic Safety Administration (NHSTA) are responsible for establishing additional vehicle standards. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. Under the standards, 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 US EPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.<sup>30</sup> Notably, California harmonized its vehicle efficiency standards through 2025 with the federal standards (see Advanced Clean Car initiative below).

In January 2017, US EPA issued its Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the model year 2022-2025 standards through a number of existing technologies. In August 2018, the US EPA revised its 2017 determination, and issued a [ HYPERLINK "https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-proposed" ] rule that maintains the 2020 Corporate Average Fuel Economy (CAFE) and CO<sub>2</sub> standards for model years 2021 through 2026.<sup>31</sup> 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. On February 7, 2019, the State of California, joined by 16 other states and the District of Columbia, filed a petition challenging the US EPA's proposed rule to revise the vehicle emissions standards, arguing that the US EPA had reached erroneous conclusions

---

<sup>30</sup> United States Environmental Protection Agency, 2012. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards. Available: (August 2012). Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2017-and-later-light-duty-vehicle>. Accessed March 11, 2019.

<sup>31</sup> Federal Register. Vol. 83, No. 165. August 24, 2018. Proposed Rules.

about the feasibility of meeting the existing standards.<sup>32</sup> As of April, 9, 2019, the case was pending and oral arguments had not been scheduled.<sup>33</sup>

## State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs from commercial and private activities within the State. The major components of California's climate protection initiative are reviewed below.

### ***Executive Orders Establishing California Greenhouse Gas Reduction Targets***

Through executive order, California governors have established long-term GHG reduction goals for the State.

#### **Executive Order S-3-05**

On June 1, 2005, Governor Schwarzenegger announced Executive Order S-3-05,<sup>34</sup> which established the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

#### **Executive Order B-30-15**

On April 29, 2015, Governor Brown issued Executive Order B-30-15, in which, the Governor:

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

### ***California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006 (AB 32)***

Following the issuance of Executive Order S-3-05, in 2006, the California State Legislature adopted the California Global Warming Solutions Act of 2006 (passed as Assembly Bill (AB) 32 and codified in the California Health and Safety Code [HSC], Division 25.5), which focuses on

<sup>32</sup> Amicus brief, 2019. USCA Case #18-1114, Doc#1772455 filed February 14, 2019. Available: [ HYPERLINK "http://climatecasechart.com/case/california-v-epa-4/" ]. Accessed April 17, 2019.

<sup>33</sup> Amicus brief, 2019. USCA Case #18-1114 Doc #1781696 filed 04.08.19. Available: [ HYPERLINK "http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2019/20190207\_docket-18-1114\_brief-1.pdf" ]. Accessed April 17, 2019.

<sup>34</sup> California Office of the Governor, 2005. Executive Order S-3-05. Available: [https://www.climatechange.ca.gov/state/executive\\_orders.html](https://www.climatechange.ca.gov/state/executive_orders.html). Accessed March 4, 2019.

reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub> and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective.

Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

### **CARB 2008 and 2014 Scoping Plans**

A specific requirement of AB 32 was the preparation of a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial Scoping Plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.<sup>35</sup>

The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 MMTCO<sub>2</sub>e. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were adopted for motor vehicles and renewable energy.<sup>36</sup>

### **SB 32/AB 197**

In 2016, Senate Bill (SB) 32 and its companion bill AB 197, augmented AB 32 and amended HSC Division 25.5, establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and including provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

### **2017 Climate Change Scoping Plan Update**

In response to SB 32 and the 2030 GHG reduction target, CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) in December 2017.<sup>37</sup> The 2017 Scoping Plan Update outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels.<sup>38</sup> The 2017 Scoping Plan

---

<sup>35</sup> California Air Resources Board, 2008. *Climate Change Scoping Plan*. Available: <https://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>. Accessed March 4, 2019. December 2008.

<sup>36</sup> California Air Resources Board, 2014. *First Update to the Climate Change Scoping Plan*. Available: <https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>. Accessed March 4, 2019. May 2014.

<sup>37</sup> California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. Available: <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed March 4, 2019. November 2017.

<sup>38</sup> California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. Available: <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed March 4, 2019. November 2017.

Update identifies key sectors of the State’s implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. Through a combination of data synthesis and modeling, CARB determined that the target Statewide 2030 emissions limit is 260 MMTCO<sub>2</sub>e, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO<sub>2</sub>e beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the Cap-and-Trade Program (discussed further below) to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2030 limit set forth by E.O. B-30-15.

The 2017 Scoping Plan Update’s strategy for meeting the State’s 2030 GHG target incorporates the full range of legislative actions and state-developed plans that have relevance to the year 2030, including the following, described elsewhere in this section:

- Extending the low carbon fuel standard (LCFS) beyond 2020 and increasing the carbon intensity reduction requirement to 18 percent by 2030;
- SB 350, which increases the Renewables Portfolio Standard (RPS) to 50 percent by 2030 and requires the commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency energy efficiency savings in electricity and natural gas final end uses of retail customers by 2030. These targets may be achieved through energy efficiency savings and demand reductions from a variety of programs, including but not limited to appliance and building energy efficiency standards and a comprehensive program to achieve greater energy efficiency standards in existing buildings;
- The 2016 Mobile Source Strategy is estimated to reduce emissions from mobile sources including an 80 percent reduction in smog-forming emissions and a 45 percent reduction in diesel particulate matter from 2016 levels in the South Coast Air Basin, a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels;
- The Sustainable Freight Action Plan to improve freight efficiency and transition to zero emission freight handling technologies (described in more detail below);
- SB 1383, which requires a 50 percent reduction in anthropogenic black carbon and a 40 percent reduction in hydrofluorocarbon and methane emissions below 2013 levels by 2030; and
- Assembly Bill 398, which extends the state Cap-and-Trade Program through 2030.

In the 2017 Scoping Plan Update, CARB recommends statewide targets of no more than six metric tons CO<sub>2</sub>e per capita by 2030 and no more than two metric tons CO<sub>2</sub>e per capita by 2050. CARB acknowledges that since the statewide per capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the State, it is appropriate for local jurisdictions to derive evidence-based local per-capita goals based on local emissions sectors and growth projections.

To demonstrate how a local jurisdiction can achieve their long-term GHG goals at the community plan level, CARB recommends developing a geographically specific GHG reduction plan (i.e., climate action plan) consistent with the requirements of CEQA Section 15183.5(b). A so-called “CEQA-qualified” GHG reduction plan, once adopted, can provide local governments with a streamlining tool for project-level environmental review of GHG emissions, provided there are adequate performance metrics for determining project consistency with the plan. Absent conformity with such a plan, CARB recommends “that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving *no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development.*”<sup>39</sup>

### **Cap-and-Trade Program**

Initially, authorized by the California Global Warming Solutions Act of 2006 (AB 32), and extended through the year 2030 with the passage of Assembly Bill 398 (2017), the California Cap-and-Trade Program is a core strategy that the State is using to meet its GHG reduction targets for 2020 and 2030, and ultimately achieve an 80 percent reduction from 1990 levels by 2050. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from major sources (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO<sub>2</sub>e per year) (deemed “covered entities”<sup>40</sup>) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve reductions.<sup>41</sup> Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors and declines over time, and facilities subject to the cap can trade permits to emit GHGs. The statewide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time, achieving GHG emission reductions throughout the Program’s duration.<sup>42</sup>

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 other words, the Cap-and-Trade Program can be adaptively managed by the State to ensure achievement of California’s 2020 and 2030 GHG emissions reduction mandates.

### **California Environmental Quality Act and Senate Bill 97**

Senate Bill (SB) 97, signed in August 2007, acknowledged that climate change is an environmental issue requiring analysis under CEQA. This bill directed the Governor’s Office of

<sup>39</sup> California Air Resources Board, 2017. *California’s 2017 Climate Change Scoping Plan*. Available: [www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](http://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf). Accessed March 9, 2019. November 2017. pp. 100-101.  
<sup>40</sup> “Covered Entity” means an entity within California that has one or more of the processes or operations and has a compliance obligation as specified in subarticle 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812 (a) of the Regulation.  
<sup>41</sup> 17 CCR §§ 95800 to 96023.  
<sup>42</sup> See generally 17 CCR §§ 95811, 95812.

Planning and Research (OPR) to prepare, develop, and transmit to the CNRA guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The CNRA was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. The State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

### **CEQA Guidelines**

The current CEQA Guidelines section 15064.4 specifically addresses the significance of GHG emissions, directing that a lead agency shall make a “good-faith effort” to “describe, calculate or estimate” GHG emissions in CEQA environmental documents.<sup>43</sup> Section 15064.4 further states that the analysis of GHG impacts should include consideration of (1) the extent to which the project may increase or reduce GHG emissions, (2) whether the project GHG emissions would exceed a threshold of significance that the lead agency determines applies to the project, and (3) the extent to which the project would comply with “regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.”

As described above, the CEQA Guidelines focus on the effects of GHG emissions as cumulative impacts, and direct that they should be analyzed in the context of CEQA’s requirements for cumulative impact analysis.<sup>44</sup> CEQA Guidelines section 15064.4 states that “the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project’s emissions to the effects of climate change. A project’s incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency’s analysis should consider a timeframe that is appropriate for the project. The agency’s analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes.” The CEQA Guidelines also establish that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CEQA Guidelines section 15064(h)(3)).

The CEQA Guidelines do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions, nor do they set a numerical threshold of significance for GHG emissions. Guideline 15064.7(c) clarifies that in adopting or using thresholds of significance, a lead agency may appropriately consider thresholds

<sup>43</sup> CNRA, 2018. CEQA Guidelines Amendments, Sections 15064.4, 15183.5, 15364.5. Available: [http://resources.ca.gov/ceqa/docs/2018\\_CEQA\\_FINAL\\_TEXT\\_122818.pdf](http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf). Accessed March 18, 2019.

<sup>44</sup> CNRA, 2009. Final Statement of Reasons for Regulatory Action, December 2009, pp. 20-26. Available: [http://resources.ca.gov/ceqa/docs/Final\\_Statement\\_of\\_Reasons.pdf](http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf). Accessed March 15, 2019.

developed by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

When GHG emissions are found to be significant, CEQA Guidelines Section 15126.4(c) includes the following direction on measures to mitigate GHG emissions:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester greenhouse gases; and
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

In late 2018, the Natural Resources Agency finalized amendments to the CEQA Guidelines, including changes to CEQA Guidelines section 15064.4, which addresses the analysis of GHG emissions. The amendments were approved by the Office of Administrative Law and filed with the Secretary of State. The amendments became effective on December 28, 2018. The revision of CEQA Guidelines section 15064.4 clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects.
- The focus of the lead agency's analysis should be on the project's effect on climate change, rather than simply focusing on the quantity of emissions and how that quantity of emissions compares to statewide or global emissions.
- The impacts analysis of GHG emissions is global in nature and thus should be considered in a broader context. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions.
- Lead agencies should consider a timeframe for the analysis that is appropriate for the project.
- A lead agency's analysis must reasonably reflect evolving scientific knowledge and state regulatory schemes.

- Lead agencies may rely on plans prepared pursuant to section 15183.5 (Plans for the Reduction of Greenhouse Gases) in evaluating a project's greenhouse gas emissions.
- In determining the significance of a project's impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is consistent with those plans, goals, or strategies.
- The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

### ***Transportation Sector***

#### **Assembly Bill 1493**

In 2002, Governor Davis signed Assembly Bill (AB) 1493 (Pavley), which required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009.

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004, requiring automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight [GVW] rating of less than 10,000 pounds and that is designed primarily for the transportation of persons), beginning with model year 2009. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for model year 2016 are approximately 37 percent lower than the limits for the first year of the regulations, model year 2009. For light-duty trucks with an LVW of 3,751 pounds to a GVW of 8,500 pounds, as well as for medium-duty passenger vehicles, GHG emissions will be reduced approximately 24 percent between 2009 and 2016.

Because the Pavley standards (named for the bill's author, state Senator Fran Pavley) would impose stricter standards than those under the CAA, California applied to the US EPA for a waiver under the CAA; this waiver was initially denied in 2008. In 2009, however, the US EPA granted the waiver. The waiver has been extended consistently since 2009; however, in 2018 the US EPA and NHTSA indicated their intent to revoke California's waiver, and prohibit future state emissions standards enacted under the CAA. As of spring 2019, the waiver was still in place and the federal government's revocation of the waiver was uncertain.

As discussed previously, the federal government adopted standards for model year 2012 through 2016 light-duty vehicles. In addition, the US EPA and US Department of Transportation (USDOT) have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the State's standards (described in the Advanced

Clean Car Program), but the State of California has agreed not to contest them, 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.

### **Advanced Clean Car Program**

In 2012, CARB approved the Pavley II (LEV III) Advanced Clean Cars program, an emissions-control scheme for model years 2015 through 2025 that allows manufacturers to comply with the 2017 through 2025 national standards while meeting state law. The program includes components to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. The zero emissions vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEV) in the 2018 to 2025 model years.<sup>45</sup>

### **Executive Order B-16-12 - 2025 Goal for Zero Emission Vehicles**

In March 2012, Governor Brown issued Executive Order B-16-12 establishing a goal of 1.5 million zero emission vehicles (ZEVs) on California roads by 2025. In addition to the ZEV goal, EO B-16-12 stipulated that by 2015 all major cities in California will have adequate infrastructure and be ‘zero-emission vehicle ready’; that by 2020 the state will have established adequate infrastructure to support 1 million ZEVs; and that by 2050, virtually all personal transportation in the State will be based on ZEVs, and GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

### **Mobile Source Strategy**

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the State can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The strategy promotes a transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of vehicle miles traveled (VMT). The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. It also calls for more stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero-emission trucks primarily for class 3 – 7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels.<sup>46</sup>

---

<sup>45</sup> California Air Resources Board, 2017. *California’s 2017 Climate Change Scoping Plan*. Available: [www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](http://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf). Accessed March 10, 2019. November 2017.

<sup>46</sup> California Air Resources Board, 2016. *Mobile Source Strategy*. Available: [ HYPERLINK "<https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.htm>" ]. Accessed March 10, 2019. May 2016.

### **Executive Order B-48-18 - 2030 Goal for Zero Emission Vehicles**

On January 26, 2018, Governor Brown issued Executive Order B-48-18 establishing a goal of 5 million ZEVs on California roads by 2030.

### **Low Carbon Fuel Standard (LCFS)**

In January 2007, Governor Schwarzenegger enacted Executive Order S-01-07, which mandates that the State do the following: (1) establish a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) adopt a Low Carbon Fuel Standard (LCFS) for transportation fuels in California. The overall goal of the low carbon fuel standard is to lower the carbon intensity of California transportation fuel. With adoption of the 2017 Scoping Plan Update, the standard has been changed to a reduction in fuel carbon intensity of at least 18 percent by 2030.

### **Land Use Transportation Planning**

On September 30, 2008, Governor Schwarzenegger signed SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations (MPOs), to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.<sup>47</sup>

Under SB 375, the regional reduction target must be incorporated within the applicable MPO's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities need to be consistent with the SCS, and consistency with the SCS can provide certain CEQA streamlining for proposed projects; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

In 2011, CARB adopted GHG emissions reduction targets for SCAG, the MPO for the region in which the City of Inglewood is located. In March 2018, the CARB updated the SB 375 targets to require an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.<sup>48,49</sup> As these reduction targets were updated after the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) was adopted, it is expected that a future iteration of the RTP/SCS will be updated to reflect them. The proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the LCFS regulations.<sup>50</sup>

<sup>47</sup> California Air Resources Board, Sustainable Communities. Available: [ HYPERLINK "https://www.arb.ca.gov/cc/sb375/sb375-rd.htm" ]. Accessed April 25, 2019.

<sup>48</sup> California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. Available: www.arb.ca.gov/cc/scopingplan/scoping\_plan\_2017.pdf. Accessed March 10, 2019. November 2017.

<sup>49</sup> California Air Resources Board, 2018. *SB 375 Regional Greenhouse Gas Emissions Reduction Targets*. Available: https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf. Accessed March 11, 2019.

<sup>50</sup> California Government Code Section 65080(b)(2)(A)(iii).

## **Energy Sector**

Appendix F of the CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, the potential energy implications of a project shall be considered in an EIR, to the extent relevant and applicable to the project. Appendix F further states that a project's energy consumption and proposed conservation measures may be addressed, as relevant and applicable, in Chapter 2, Project Description and in technical sections found in Chapter 3, Environmental Impacts, Settings, and Mitigation Measures, as well as through mitigation measures and alternatives. In accordance with Appendix F, the energy effects of the Proposed Project are addressed in Section 3.5, Energy Demand and Conservation, of this EIR.

### **Title 24 Building Energy Efficiency Standards**

California Code of Regulations, Title 24, establishes California's Building Energy Efficiency Standards; Part 11 is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."<sup>51</sup> Since 2011, the CALGreen Code is mandatory for all new residential and non-residential buildings constructed in the State. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2017.<sup>52</sup>

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

The current Title 24, Part 6 standards (2016 standards) were made effective on January 1, 2017. The next update to the Title 24 energy efficiency standards (2019 standards) go into effect on January 1<sup>st</sup>, 2020.

---

<sup>51</sup> California Building Standards Commission, 2010. *California 2010 Green Building Standards Code (CalGreen)*. Available: [ HYPERLINK "[http://www.hcd.ca.gov/building-standards/docs/2010\\_CA\\_Green\\_Bldg.pdf](http://www.hcd.ca.gov/building-standards/docs/2010_CA_Green_Bldg.pdf)" ]. Accessed March 11, 2019.

<sup>52</sup> California Building Standards Commission, 2016. 2016 California Green Building Standards Code (Part 11 of Title 24). Available: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen>. Accessed April 25, 2019.

### **Renewables Portfolio Standard**

In 2002, the passage of SB 1078 established the Renewables Portfolio Standard (RPS), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from eligible renewable sources by 2017. SB 107, adopted into law in 2006, changed the target date to 2010.

In November 2008, Executive Order S-14-08 expanded the state's RPS goal to 33 percent renewable power by 2020. In September 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified in April 2011 with the passage of Senate Bill X1-2. This new RPS applied to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators.

Senate Bill 350, signed in October 2015, required retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Most recently, Senate Bill 100, signed by Governor Brown on September 10, 2018, increased the RPS requirement to 60 percent eligible renewables by 2030 and 100 percent by 2045.

### **SB 1383 (Short-lived Climate Pollutants)**

Senate Bill 1383, passed in 2016, requires statewide reductions in short-lived climate pollutants (SLCPs) across various industry sectors. The SLCPs covered under AB 1383 include methane, fluorinated gases, and black carbon – all GHGs with a much higher warming impact than carbon dioxide and with the potential to have detrimental effects on human health. SB 1383 requires the CARB to adopt a strategy to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The methane emission reduction goals include a 75 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2025.

### **Assembly Bill 987 (AB 987)**

AB 987 was signed by Governor Jerry Brown on September 30, 2018. The bill added section 21168.6.8 to the California Public Resources Code (PRC). AB 987 does not change the substantive content of this EIR or the public review requirements for the EIR. It does however establish specific timelines for judicial review in the event that the adequacy of this EIR is challenged, so long as certain requirements are met. The discussion of AB 987 below is focused on the provisions of PRC 21168.6.8 that address GHG emissions; a full description of AB 987 is provided in Chapter 1, Introduction.

AB 987 is described in this chapter under Regulatory Setting because it potentially applies to the Proposed Project and addresses issues related to GHG emissions. However, it is not a regulatory statute, per se, in that the Proposed Project is not required to comply with the provisions of PRC 21168.6.8. Rather, AB 987 established provisions by which the project applicant for the Proposed Project may voluntarily decide to attempt to qualify under the provisions of the statute. If certified

as qualified by the Governor’s Office, then specific timelines for judicial review identified in AB 987 would apply to any action brought to challenge the certification of this EIR or the approval of the Proposed Project. In the event that the Proposed Project does not qualify under the provisions of AB 987, the Proposed Project could still be reviewed and approved by the City, but judicial review would occur under the standard provisions of CEQA.

The provisions of PRC section 21168.6.8 are similar to the provisions of the Jobs and Economic Improvement through Environmental Leadership Act of 2011 (AB 900; PRC sections 21178 through 21189.3), as subsequently amended, which established expedited judicial review of certified Environmental Leadership Development Projects. In order to qualify for expedited judicial review under AB 987, the Proposed Project would have to achieve certain vehicle trip reduction goals, and, most relevantly for this section, would have to achieve a “no net new” GHG emissions standard.<sup>53</sup> Further, as a condition of approval of the Proposed Project, the lead agency must require the project applicant, in consultation with the SCAQMD, to implement measures that will achieve certain minimum criteria air pollutant and toxic air contaminant reductions over and above any reductions required by other laws or regulations in communities surrounding the Project Site.

## **Regional**

### ***South Coast Air Quality Management District***

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

The 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;

---

<sup>53</sup> Office of the Governor, 2018. Assembly Bill 987 Signing Message. September 30.

- 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.<sup>54</sup> Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 metric tons per year. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is lead agency. However, the SCAQMD did not adopt a GHG significance threshold for land use development projects (e.g., mixed-use/commercial projects) and formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds. The aforementioned Working Group has been inactive since 2011 and the SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

### ***SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)***

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization for the region in which the City of Inglewood is located. In April 2016, SCAG adopted the *2016 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life (RTP/SCS)*, which is an update to the previous 2012 RTP/SCS.<sup>55</sup>

The 2016 RTP/SCS considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2016 RTP/SCS describes how the region can attain the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction in passenger vehicle GHG emissions on a per capita basis by 2020, 18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level. Compliance with and implementation of 2016 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions and toxic air contaminants associated with reduced per capita VMT.

SCAG's 2016 RTP/SCS builds on the land use policies that were incorporated into the 2012 RTP/SCS, and provides specific strategies for successful implementation. These strategies include development of "complete communities," defined as mixed-use districts that concentrate housing, employment, and a mix of retail and services in close proximity to each other;

---

<sup>54</sup> South Coast Air Quality Management District, 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008. Available: [ HYPERLINK "[http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf)" ]. Accessed: April 17, 2019.

<sup>55</sup> Southern California Association of Governments, 2016. *2016 Regional Transportation Plan/Sustainable Communities Strategy*. Available: <http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx>. Accessed March 11, 2019. Adopted April 2016.

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. The 2016 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s high quality transit areas (HQTAs), which SCAG defines as areas within one-half mile of a well-serviced fixed guideway transit stop, and it includes bus transit corridors where buses pick up passengers every 15 minutes or less during peak commute hours.

In addition, the 2016 RTP/SCS includes goals and strategies to promote active transportation and improve transportation demand management (TDM). The 2016 RTP/SCS strategies support local planning and projects that serve short trips, increase access to transit, expand understanding and consideration of public health in the development of local plans and projects, and support improvements in sidewalk quality, local bike networks, and neighborhood mobility areas. The 2016 RTP/SCS proposes to better align active transportation investments with land use and transportation strategies, increase competitiveness of local agencies for federal and state funding, and to expand the potential for all people to use active transportation.

In June 2016, CARB accepted SCAG’s quantification of GHG emission reductions from the 2016 RTC/SCS and the determination that the 2016 RTP/SCS would, if implemented, achieve the 2020 and 2035 GHG emission reduction targets established by CARB.<sup>56</sup>

The Proposed Project’s consistency with the 2016-2040 RTP/SCS is discussed under Impact 3.7-2 in Section 3.7.4.

## Local

### ***City of Inglewood General Plan***

The City of Inglewood General Plan sets forth goals, objectives, and policies for the future development of the City and designates the location of desired future land uses within the City.

The following goals from the Land Use Element<sup>57</sup> of the City of Inglewood General Plan are relevant to GHG emissions.

**Circulation Goal:** Promote and support adequate public transportation within the City and the region.

**Circulation Goal:** Develop a safe and adequate pedestrian circulation system which is barrier free for the handicapped.

---

<sup>56</sup> California Air Resources Board, 2016. *Southern California Association of Governments’ (SCAG) 2016 Sustainable Communities Strategy (SCS) ARB Acceptance of GHG Quantification Determination*, Available: [ HYPERLINK "https://www.arb.ca.gov/cc/sb375/scag\_executive\_order\_g\_16\_066.pdf" ]. Accessed March 11, 2019. June 2016.

<sup>57</sup> City of Inglewood, Department of Community Development and Housing, 1980. Land Use Element of the Inglewood General Plan. January 1980. Amended September 14, 2016.

The use of public transportation reduces the GHG emissions that would otherwise occur through the use of private vehicles. Safe and adequate pedestrian networks promote walking and the use of assisted mobility devices (e.g., wheelchairs) instead of driving. The Proposed Project would include provisions that would promote the use of public transportation as a means of travel to and from the arena, including a transportation hub at the East Transportation and Hotel Site, shuttle stops on South Prairie Avenue, and a shuttle system for large events that would connect the Proposed Project to nearby Metro stations. In addition, improvements to the sidewalks fronting the Project Site and a pedestrian bridge crossing South Prairie Avenue would promote a safe pedestrian circulation system that would meet ADA requirements. For these reasons, the Proposed Project would not be inconsistent with the General Plan Land Use Element circulation goals listed above. Ultimately, it is within the authority of the City Council to determine whether the Proposed Project is consistent with the City of Inglewood General Plan.

The Proposed Project’s consistency with the City of Inglewood General Plan is discussed under Impact 3.7-2 in Section 3.7.4.

**City of Inglewood Energy and Climate Action Plan**

The Inglewood Energy and Climate Action Plan (ECAP) presents the City’s community and municipal inventories, emissions forecasts, and recommended reduction targets for emissions to mitigate the City’s impacts on climate change.<sup>58</sup> The ECAP includes a business-as-usual (BAU) forecast that estimates future emissions in 2020 and 2035 from six sectors: commercial and municipal; industrial; residential; transportation; solid waste; and water. The BAU forecast assumes a future under regulatory conditions as they existed in 2010, and it does not include the effects of updates to Title 24, the Renewables Portfolio Standard, and the Pavley Clean Car Standards on future GHG emissions. Under the BAU forecast, Inglewood’s total GHG emissions are expected to increase approximately 14 percent from 2010 (594,273 MTCO<sub>2e</sub>) to 2035 (678,283 MTCO<sub>2e</sub>). On a per-service population (SP)<sup>59</sup> basis, the increase is shown to be just 4.5 percent, from 4.22 MTCO<sub>2e</sub>/SP in 2010 to 4.41 MTCO<sub>2e</sub>/SP in 2035.

The City’s greenhouse gas inventories and forecasts are summarized in **Table 3.7-4, City of Inglewood Community GHG Emissions by Sector: Existing and Forecasted (MTCO<sub>2e</sub>)**, below.

**TABLE 3.7-4  
 CITY OF INGLEWOOD COMMUNITY GHG EMISSIONS BY SECTOR: EXISTING AND FORECASTED (MTCO<sub>2e</sub>)**

Sector	2005	2007	2010	2020	2035
Transportation	320,254	311,853	322,042	327,998	337,552
Residential Energy	124,872	123,062	122,429	134,843	156,574
Commercial/Municipal Energy	97,176	99,458	95,261	106,041	124,749
Industrial Energy	34,940	31,272	26,100	26,376	26,830
Solid Waste	19,855	16,841	16,448	16,782	17,555

<sup>58</sup> City of Inglewood, 2013, *Inglewood Energy and Climate Action Plan*. Available: [ HYPERLINK "https://www.cityofinglewood.org/225/Sustainability" ]. Accessed Feb 15, 2019. March 2013.

<sup>59</sup> Service population = residents plus employees working within the City limits

Sector	2005	2007	2010	2020	2035
Water	13,813	13,272	11,993	14,707	15,044
<b>Total</b>	<b>610,910</b>	<b>595,758</b>	<b>594,273</b>	<b>626,748</b>	<b>678,284</b>
<b>Target</b> (change from 2005)				<b>519,273</b> (-15%)	<b>412,364</b> (-32.5%)
Reductions from State-level Actions				-121,139	-160,002
Forecasts with implementation of State-level Actions				<b>505,609</b>	<b>518,282</b>
Reductions from Local Actions				-9,803	-10,994
Forecasts with CAP Implementation				495,806	499,208
Resulting change from 2005				- 18.8%	- 18.3%
<b>Meet target?</b>				<b>yes</b>	<b>no</b>

SOURCE: City of Inglewood, 2013. *Inglewood Energy and Climate Action Plan*.

The City’s emission reduction targets are 15 percent below 2005 levels by 2020 and 32.5 percent below 2005 levels by 2035. As shown in Table 3.7-4, State-level actions, such as the Pavley Clean Cars legislation, the Low Carbon Fuel Standard, the Renewables Portfolio Standard, and Title 24 upgrades are expected to reduce community emissions by 121,139 MT CO<sub>2e</sub> per year by 2020, and 160,002 by year 2035. Local measures in the CAP are expected to reduce community emissions an additional 9,803 MT CO<sub>2e</sub> per year by 2020, and 10,994 MT CO<sub>2e</sub> per year by year 2035. The ECAP quantifies GHG reductions from the following five implementing strategies and actions:

**Strategy 1 – Lead by Example with Municipal Government Actions**

- Continue Building and Facility Energy Upgrades to reduce energy use
- Replace all City-owned street, park, and traffic lights with LED lights
- Accelerate city vehicle fleet replacement
- Continue commute trip reduction program
- Planning for electric vehicle infrastructure

**Strategy 2: Increase Energy Efficiency**

- Make commercial buildings more efficient
- Increase the energy efficiency of residential buildings
- Increase the energy efficiency of street and traffic lights.

**Strategy 3: Support Renewable Energy Generation**

- Remove barriers to renewable energy generation
- Make renewable energy generation more affordable
- Educate potential customers

#### **Strategy 4: Improve Transportation Options and Manage Transportation Demand**

- Make roadways more efficient
- Improve transit
- Improve bicycle facilities
- Make parking more efficient
- Reduce commute trips
- Encourage land use intensification and diversity

#### **Strategy 5: Reduce Consumption and Waste**

- Use less water
- Produce less water
- Promote local food production

The Proposed Project's consistency with the ECAP is discussed under Impact 3.7-2 in Section 3.7.4.

### **3.7.4 Analysis, Impacts and Mitigation**

#### **Significance Criteria**

The City has not adopted thresholds of significance for analysis of impacts related to GHG emissions. As described above, in 2009 the CNRA adopted amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. As a result of the amendments, Appendix G of the CEQA Guidelines was amended to provide screening questions to assist lead agencies when assessing a project's potential impacts with regard to GHG emissions, and additional amendments were made in 2018. The following thresholds of significance are consistent with CEQA Guidelines section 15064.4 and CEQA Guidelines Appendix G.

A significant impact would occur if the Proposed Project would:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines gives lead agencies the discretion to determine whether to assess the significance of GHG emissions quantitatively or qualitatively. Section 15064.4 recommends considering certain factors, among others, when determining the significance of a project's GHG emissions, including the extent to which the Proposed Project may increase or reduce GHG emissions as compared to the existing environment; whether the Proposed Project exceeds an applicable significance threshold; and extent to which the Proposed Project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs. None

of the amendments establishes a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including by looking to thresholds developed by other public agencies, such as air districts, or suggested by experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)).

The CNRA's *Final Statement of Reasons for Regulatory Action* from December 2009 similarly provides that project-level quantification of emissions should be conducted where it would assist in determining the significance of emissions, even where no numeric threshold applies. In such cases, CNRA's guidance provides that qualitative thresholds can be utilized to determine the ultimate significance of project-level impacts based on a project's consistency with plans, which can include applicable regional transportation plans. Even when using a qualitative threshold, quantification can inform "the qualitative factors" and indicate "whether emissions reductions are possible, and, if so, from which sources."<sup>60</sup>

Neither CARB, SCAQMD, nor the City has adopted quantitative significance thresholds for assessing project-level impacts related to GHG emissions. Section 15183.5 of the CEQA Guidelines states that a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted mitigation program, or plan for the reduction of GHG emissions that includes the following elements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

The City of Inglewood's ECAP, adopted in 2013, provides a set of strategies and supporting actions for achieving the City's 2020 GHG reduction targets, but it does not demonstrate how the

---

<sup>60</sup> California Natural Resources Agency, 2009. *Final Statement of Reasons for Regulatory Action*, December 2009, pp. 20-26. Available: [http://resources.ca.gov/ceqa/docs/Final\\_Statement\\_of\\_Reasons.pdf](http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf). Accessed March 15, 2019.

City plans to reduce GHG emissions consistent with the State’s post-2020 targets as represented by SB 32 and EO S-3-05.

CARB’s 2017 Scoping Plan Update advises that absent conformity with a qualified GHG reduction plan, projects should incorporate all feasible GHG reduction measures and that achieving “no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development.” Accordingly, the City is establishing a quantitative threshold for the Proposed Project of no net additional GHG emissions, including emissions from employee transportation. This threshold by definition represents a zero impact.

Consistent with Appendix G, the City is also assessing whether the Proposed Project would conflict with (and thereby be inconsistent with), the with the applicable regulatory plans, policies, regulations or requirements adopted to implement a statewide, regional or local plan for the reduction of GHG emissions.

### ***Project Consistency with Existing Plans, Policies and Regulations***

A significant impact would occur if the Proposed Project would conflict with applicable regulatory plans and policies to reduce GHG emissions. For the Proposed Project, as a land use development project, this analysis compares the Proposed Project’s consistency with the following applicable plans, policies and regulations to reduce GHG emissions:

- SB 32 and CARB’s 2017 Climate Change Scoping Plan Update;
- SCAG’s 2016-2040 RTP/SCS;
- Executive Order S-3-05;
- CARB’s Mobile Source Strategy and Executive Order B-48-18; and
- The City’s ECAP.

### ***Determining Net New Emissions of Greenhouse Gases***

The net new GHG emissions associated with the Proposed Project is defined as the difference in emissions between baseline conditions in 2018 and Proposed Project buildout. Baseline operational emissions are the annual operational GHG emissions produced by existing emissions sources and activities against which the Proposed Project’s GHG emissions will be compared. The Proposed Project’s operational emissions will occur starting in 2024 and continue through the 30-year life of the Proposed Project to 2054. For the purpose of this analysis, the Proposed Project’s annual operational emissions include total construction emissions amortized over the 30-year life of the Proposed Project, consistent with regulatory guidance from SCAQMD.<sup>61</sup>

<sup>61</sup> South Coast Air Quality Management District, 2008. South Coast Air Quality Management District, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available: [ HYPERLINK "http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf" ]. Accessed March 11, 2019. October 2008, pp. 3-16.

## Methodology and Assumptions

Baseline annual emissions include existing on-site structures that would be removed and replaced with construction of the Proposed Project and Project Variants, as well as the operational emissions from the LA Clippers games at the Staples Center, LA Clippers' team business operations, the LA Clippers' training center, and non-NBA events that would be market-shifted to the new arena.

This analysis assumes that [REDACTED] % of the non-NBA game events (e.g., concerts, family shows, non-NBA sports games, etc.) anticipated to occur at the arena would be new events that would not otherwise occur in the Los Angeles area, and that the balance of such events would have otherwise occurred at other venues in the Los Angeles area, but would be relocated at the Project Site, the latter of which are referred to as market-shifted events in this analysis. The market-shifted events are considered part of the Proposed Project baseline conditions.

This analysis conservatively assumes that half of the non-NBA game events (e.g., concerts, family shows, non-NBA sports games, etc.) anticipated to occur at the arena would be new events that would not otherwise occur in the Los Angeles area, and half of such events would have otherwise occurred at other venues in the Los Angeles area, but would be relocated at the Project Site, the latter of which are referred to as market-shifted events in this analysis. The market-shifted events are considered part of the Proposed Project baseline conditions.

This analysis also conservatively assumes that emissions from the existing LA Clippers Team Offices, which are located at 1212 South Flower Street, Los Angeles, California, and the existing LA Clippers Training Center, which is located at 6854 South Centinela Avenue in Los Angeles, California, are not included in the Proposed Project baseline. Although these uses would be relocated to the Project Site upon completion of construction, it is likely that the facilities would be backfilled with new tenants once they are vacated by the LA Clippers. This is particularly true of the current LA Clippers team offices in downtown Los Angeles, located in a multi-tenant office building where demand for commercial real estate is relatively high. For the LA Clippers' Training Center, it would be speculative to assume what type of use might occupy it in the future given its unique design and space allocation, but for the purposes of this analysis it is assumed that a new tenant will backfill it with a similar emissions profile. Thus, the existing emissions from operations of both the Team Offices and the Training Center are not considered part of the Proposed Project baseline conditions.

Development of the Proposed Project would first require the acquisition of the properties located within the Project Site, including several parcels that are currently developed with existing on-site uses. Existing buildings within the Project Site include a 16,806-sq. ft. hotel, 1,118-sq. ft. fast food restaurant, 28,809-sq. ft. light industrial building, and a 1,134-sq. ft. commercial building, and a 6,321-sq. ft. light industrial building. The Alternate Prairie Access Variant would involve two additional parcels developed with a 1,628-sq. ft. three-unit residential building and a 795-sq. ft. single-family residence, if made available for sale by the current property owners and acquired by the project applicant. All structures on properties acquired for the Proposed Project would be

removed prior to start of construction. Emissions associated with the existing buildings that would be removed prior to construction of the Proposed Project or the Alternate Prairie Access Variant were included in the baseline conditions, with the exception of the 6,321-sq. ft. light industrial building that was vacant at the time that the NOP for the Proposed Project was published in February 2018.

### **GHG Calculation Methodology**

The evaluation of potential impacts to GHG emissions that may result from the construction and long-term operations of the Proposed Project is consistent with CEQA Guidelines section 15064.4(a) and recent related guidance from OPR.<sup>62</sup> This analysis considers GHG emissions resulting from Project-related incremental (net) increases in the use of on road vehicles, electricity, and natural gas compared to existing conditions. This includes construction activities associated with the Proposed Project such as demolition, hauling, and construction worker trips. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis.

GHG quantification methods rely on guidance from state and regional agencies with scientific expertise in quantifying GHG emissions, including CARB and the SCAQMD. GHG emissions are estimated using CalEEMod Version 2016.3.2, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria air pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California and is recommended by the SCAQMD for evaluating GHG emissions for projects under CEQA.<sup>63</sup> Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is an established, accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.<sup>64</sup>

### **Baseline Operation Emissions**

Operational emissions associated with the 2018 baseline condition include emissions from energy (electricity and natural gas), on-road motor vehicles (mobile), solid waste, water and wastewater, and area sources.

#### **Energy**

The existing operations at Staples Center and the Project Site consume energy (electricity and natural gas) for multiple purposes including, but not limited to, building heating and cooling,

<sup>62</sup> The GHG operational analysis is consistent with the OPR's *CEQA and Climate Change Advisory Discussion Draft*. As stated therein, "when possible, lead agencies should quantify the project's construction and operational greenhouse gas emissions, using available data and tools, to determine the amount, types, and sources of greenhouse gas emissions resulting from the project." Governor's Office of Planning and Research, *CEQA and Climate Change Advisory Discussion Draft*, December 2018, page 8. Accessed March 2019.

<sup>63</sup> South Coast Air Quality Management District, *Air Quality Modeling for CEQA*, [ HYPERLINK "http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-modeling" ]. Accessed April 25, 2019.

<sup>64</sup> See: [ HYPERLINK "http://www.aqmd.gov/caleemod/" ], Accessed April 25, 2019.

lighting, and electronics. For the GHG analysis, building electricity and natural gas usage rates for existing operations are based on CalEEMod defaults for specific building types, based on the date each building was constructed, if known. For existing land uses, electricity is supplied by Southern California Edison (SCE) and natural gas is supplied by Southern California Gas Company.

For electricity usage, CalEEMod calculates GHG emissions based on the estimated electricity usage, the GHG emission factors for the electricity utility provider (SCE), and the GWP values for the GHGs emitted. CalEEMod provides default CO<sub>2</sub>e intensity factors for natural gas and for SCE-supplied electricity. CalEEMod's default CO<sub>2</sub>e intensity factor for SCE-provided electricity, 705 lbs CO<sub>2</sub>e/MWh (0.320 MT CO<sub>2</sub>e/MWh), is based on the year 2012.<sup>65</sup> However, as described in Section 3.7.3, California's Renewables Portfolio Standard mandates that publicly owned electric utilities procure an increasing percentage of its total sales as renewable power, with a 2020 goal of 33 percent qualifying renewables. SCE's average power mix in 2017 included 32 percent as qualified as renewable under the RPS.<sup>66</sup> SCE's progress in meeting its 2020 RPS obligation is reflected in its decreasing average emission factor since 2012. For 2016 and 2017, SCE reports average GHG emission factors for its total electricity mix as 0.259 and 0.232 MT CO<sub>2</sub>e/MWh, respectively.<sup>67</sup> Thus, the analysis of existing operations emissions uses the 2017 electricity emission factor since it is the most recent SCE emission factor available.

For natural gas usage, CalEEMod calculates operational GHGs emissions based on estimated natural gas demand, the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted. Natural gas demand for the existing land uses is based on data from the CEUS, which lists energy demand by building type.<sup>68</sup> The data from the CEUS is from 2002, which is assumed to be a reasonable date to represent the energy efficiency of the existing buildings at the Project Site. CalEEMod's default statewide emission factor for natural gas combustion was used in the analysis.

### Mobile Sources

Mobile source GHG emissions associated with existing operations were calculated using EMFAC 2014 and EMFAC2017 emission factors and the estimated VMT from the Transportation Impact Assessment prepared by Fehr & Peers.<sup>69</sup> Emissions modeling was conducted using the vehicle fleet mix for the South Coast Air Basin as provided in the EMFAC models, and Air Basin-specific vehicle fleet emission factors for 2018 in units of grams or metric tons per mile.

<sup>65</sup> Southern California Edison, 2012. 2012 Corporate Responsibility and Sustainability Report. Available: [ HYPERLINK "https://www1.sce.com/wps/wcm/connect/68145014-2eba-40c2-8587-6482ce056977/CRR\_08202013.pdf?MOD=AJPERES&ContentCache=NONE" ]. Accessed April 5, 2019.

<sup>66</sup> California Energy Commission, 2017. 2017 Power Content Label. Available: <https://www.energy.ca.gov/pcl/>. Accessed April 5, 2019.

<sup>67</sup> Southern California Edison, 2018. ESG/Sustainability Template. Report date: September 27, 2018. Available: [ HYPERLINK "https://www.edison.com/content/dam/eix/documents/sustainability/eix-esg-pilot-quantitative-section-sce.pdf" ]. Accessed April 5, 2019.

<sup>68</sup> California Energy Commission, California Commercial End-Use Survey, <http://capabilities.itron.com/CeusWeb/ChartsSF/Default2.aspx>. Accessed April 25, 2019.

<sup>69</sup> Refer to Appendix X.

### Solid Waste

Existing operations generate solid waste from day-to-day activities, which generally consists of product packaging, grass clippings, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the waste is diverted to waste recycling and reclamation facilities. Waste that is not diverted is typically sent to local landfills for disposal, where it results in GHG emissions of CO<sub>2</sub> and CH<sub>4</sub> from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal from existing operations are calculated using the CalEEMod software, which bases its estimates on the size of the existing land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted.

CalEEMod allows the input of several variables to quantify solid waste emissions. The GHG emission factors, particularly for CH<sub>4</sub>, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, no flaring, no energy recovery) are statewide averages and are used in this assessment to provide a worst-case approach.

### Water and Wastewater

GHG emissions from water use associated with existing operations are calculated using CalEEMod and the Water Supply Assessment prepared for the Proposed Project, the electrical intensity factors for water supply and distribution, and the GHG emission factors for the electricity utility provider. For more detail on the Water Supply Assessment, see Section 3.15, Utilities and Service Systems.

GHG emissions from wastewater treatment associated with existing operations are calculated using CalEEMod and wastewater generation rates for existing operations based on data from the Los Angeles County Sanitation District (LACSD). Emissions are quantified using default CalEEMod emission factors for the type of wastewater treatment process and the GHG emission factors for the electricity utility provider. For more information on the wastewater generation estimates, see Section 3.15, Utilities and Service Systems.

### Area Sources

The emissions of GHGs associated with area sources at existing operations are calculated using the CalEEMod software, sources types landscaping equipment and natural gas fireplaces. The emissions for landscaping equipment are based on the size of the existing land uses, the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted. CalEEMod uses landscaping equipment GHG emission factors from CARB OFFROAD model and CARB's *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment*

(6/13/2003).<sup>70</sup> CalEEMod estimates that landscaping equipment operates for 250 days per year in the South Coast Air Basin. CalEEMod estimates emissions from fireplaces based on US EPA's AP-42 emission factors for natural gas combustion and default annual operational hours based on 25 days per year and 3 hours per day.

### Stationary Sources

As a conservative approach, it is assumed that the baseline of existing operations does not include emergency generators as a source of GHG emissions.

### Project Construction Emissions

The emissions of GHGs associated with construction of the Proposed Project were calculated for each year of construction activity using CalEEMod and EMFAC2014 and EMFAC2017. Construction emissions are forecasted by assuming a conservative estimate of construction activities with construction of the Proposed Project and Project Variants occurring in several overlapping phases over approximately 36 months, from 2021 through June 2024 (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source emissions factors. The output values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the same construction phasing assumptions used in the criteria air pollutant analysis (see Section 3.2, Air Quality, of this Draft EIR) to generate GHG emissions values for each construction year. Construction of the Proposed Project would result in one-time GHG emissions of CO<sub>2</sub> and smaller amounts of CH<sub>4</sub> and N<sub>2</sub>O from construction equipment. Construction equipment emissions are forecasted by assuming a conservative estimate of construction activities and applying the off-road emissions factors using CalEEMod. The output values used in this analysis are adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the same construction equipment and phasing assumptions used in the criteria air pollutant analysis to generate GHG emissions values for each construction year.

The CalEEMod software provides options for specifying equipment, horsepower ratings, load factors, and operational hours per day. Construction equipment lists for each phase of construction activity were provided by the project applicant's contractor representative. Equipment operational hours were increased for the majority of the heavy-duty off-road equipment from CalEEMod default values, which are typically 8 hours or less, to up to 14 hours per day to conservatively estimate the Proposed Project's maximum emissions. Construction of the Proposed Project would generate GHG emissions of CO<sub>2</sub> and lesser amounts of CH<sub>4</sub> and N<sub>2</sub>O from vendor trucks, haul trucks and worker vehicles. The emissions are estimated using the emission factors generated from the EMFAC2014 and EMFAC2017 models, similar to the criteria air pollutant analysis.

---

<sup>70</sup> California Air Resources Board, OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, June 13, 2003. Available: [ HYPERLINK "https://ww3.arb.ca.gov/msei/2001\_residential\_lawn\_and\_garden\_changes\_in\_eqpt\_pop\_and\_act.pdf" ]. Accessed: April 5, 2019.

The SCAQMD recognizes that construction-related GHG emissions from projects “occur over a relatively short-term period of time” and that “they contribute a relatively small portion of the overall lifetime project GHG emissions.”<sup>71</sup> The SCAQMD recommends that construction project GHG emissions should be “amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.”<sup>72</sup> As such, GHG emissions from construction have been amortized over the 30-year lifetime of the Proposed Project.

### **Project Operational Emissions**

Operational emissions associated with the Proposed Project include emissions from energy (electricity and natural gas), on-road motor vehicles (mobile), solid waste, water and wastewater, and area sources. Detailed methodology for each emission source is presented below.

The operational life of the Proposed Project is assumed to be 30 years, consistent with SCAQMD guidance.<sup>73</sup> Accordingly, operational emissions were estimated from the anticipated start of operations at the Proposed Project in July 2024 through 2054, using the CalEEMod software and CARB’s on-road vehicle emissions factor (EMFAC2014 and EMFAC2017) models. CalEEMod was used to estimate GHG emissions from electricity, natural gas, solid waste, water and wastewater, fireplaces, and landscaping equipment. EMFAC2014 and EMFAC2017 emission factors along with VMT provided by the Traffic Impact Assessment (TIA) were used to estimate on-road mobile source GHG emissions.<sup>74</sup>

### **Energy**

The Proposed Project and Project Variants would consume energy (electricity and natural gas) for multiple purposes including, but not limited to, building heating and cooling, lighting, and electronics. Building electricity and natural gas usage rates are based on CalEEMod defaults for building types, adjusted for the Proposed Project’s compliance with 2019 Title 24 building energy efficiency standards. The Proposed Project’s electricity and natural gas demands will be supplied by SCE.

For electricity usage, CalEEMod calculates GHG emissions based on the estimated electricity usage for the various land uses (i.e., arena, office, hotel, retail/restaurant and parking), the GHG emission factors for the electricity utility provider (SCE), and the GWP values for the GHGs emitted. CalEEMod provides default CO<sub>2</sub>e intensity factors for natural gas and for SCE-supplied

<sup>71</sup> South Coast Air Quality Management District, 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available: [ HYPERLINK "http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf" ]. Accessed March 11, 2019. October 2008, pp. 3-8.

<sup>72</sup> South Coast Air Quality Management District, 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available: [www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf). Accessed March 11, 2019. October 2008, pp. 3-8.

<sup>73</sup> South Coast Air Quality Management District, 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. Available: [ HYPERLINK "http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf" ]. Accessed March 11, 2019. October 2008, pp. 3-16.

<sup>74</sup> Refer to Appendix X.

electricity. However, as described in Section 3.7.3, SB 100 increased California’s Renewables Portfolio Standard and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 60 percent of retail sales by December 31, 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 also mandates interim RPS milestones of 44 percent of retail sales by December 31, 2024, and 52 percent by December 31, 2027. To achieve the RPS mandate, utilities such as SCE will steadily increase their renewable resources for energy production. Therefore, all electricity consumption from SCE sources would decrease in GHG intensity (i.e., emissions generated per kilowatt-hour) as the RPS milestones are met.

For estimating electricity emissions for the Proposed Project, CO<sub>2</sub>e intensity factors projected for each operational year through 2054, based on RPS compliance, as shown in Table XX.

**TABLE XX**  
**PROJECT ELECTRICITY EMISSION FACTORS**

<b>Year</b>	<b>RPS Mandate</b>	<b>Electricity Emission Factor (MT CO<sub>2</sub>e/MWh)</b>
<b>2020</b>	<b>33%</b>	<b>0.224</b>
2021		0.215
2022		0.206
2023		0.197
<b>2024</b>	<b>44%</b>	<b>0.188</b>
2025		0.179
2026		0.170
<b>2027</b>		<b>52%</b>
2028	0.152	
2029	0.143	
<b>2030</b>	<b>60%</b>	
2031		0.125
2032		0.116
2033		0.107
2034		0.098
2035		0.089
2036		0.080
2037		0.071
2038		0.062
2039		0.054
2040	0.045	
2041	0.036	
2042	0.027	
2043	0.018	
2044	0.009	
<b>2045</b>	<b>100%</b>	<b>0.000</b>
2046		0.000
2047		0.000
2048		0.000

2049	0.000
2050	0.000
2051	0.224
2052	0.215
2053	0.206
2054	0.197

NOTES:  
<sup>a</sup> See Table YY in Appendix X for derivation of electricity emission factors for RPS milestone years

For natural gas usage, CalEEMod calculates operational GHGs emissions using the estimated natural gas demand of the various land uses, the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted. Natural gas demand is based on data from the CEUS, which lists energy demand by building type.<sup>75</sup> However, since the data from the CEUS is from 2002, correction factors are applied to account for compliance with the updated 2019 Title 24 Building Standards Code. CalEEMod’s default statewide emission factor for natural gas combustion was used in the analysis.

**Mobile Sources**

Mobile source emissions for the Proposed Project include event-day trips related to LA Clippers games and other events at the arena, commute trips by arena staff employees (including office, basketball facilities, medical center employees, and visitor trips associated with the ancillary development land uses.

CalEEMod methodology estimates mobile GHG emissions from running, idling, and starting exhaust for the aggregated projected vehicle fleet in a given calendar year and county. Mobile source emissions are the product of the estimated VMT and the emission factors representative of the vehicle fleet. Mobile source emissions were calculated using the estimated VMT from the TIA prepared by Fehr & Peers<sup>76</sup> and emission factors for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O that were obtained from EMFAC2014 and EMFAC2017 for Los Angeles County.<sup>77</sup> As on-road vehicle trip associated with spectators, event-day staff, and employees are expected to be primarily passenger vehicles, the default Los Angeles County fleet mix was adjusted for a passenger fleet mix of light-duty autos, motorcycles, light duty trucks, and medium-duty vehicles to estimate passenger fleet-average emission factors. For ancillary land uses including the hotel and restaurant/retail land uses, the default Los Angeles County fleet mix was used to estimate fleet-average emission factors.

Emission factors for mobile source emissions are assumed to decrease in future years due to fleet turnover and regulations such as Advanced Clean Cars Program. Therefore, emission factors were

<sup>75</sup> California Energy Commission, California Commercial End-Use Survey, <http://capabilities.itron.com/CeusWeb/ChartsSF/Default2.aspx>. Accessed April 25, 2019.  
<sup>76</sup> Refer to Appendix X  
<sup>77</sup> CalEEMod incorporates on-road vehicle emission factors from the prior release of the model, EMFAC2014. ESA incorporated updated EMFAC2017 emission factors as it is the best available data.

derived from both EMFAC2014 and EMFAC2017 for each year after 2024 (first operational year) through 2050, as shown in Table X in Appendix X. EMFAC2017 does not provide emission factors beyond 2050; thus emissions associated with mobile sources were conservatively assumed to remain constant through 2050 and 2054.

### Solid Waste

The Proposed Project would generate solid waste from day-to-day operational activities, which generally consists of product packaging, grass clippings, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the waste is diverted to waste recycling and reclamation facilities. Waste that is not diverted is typically sent to local landfills for disposal, where it results in GHG emissions of CO<sub>2</sub> and CH<sub>4</sub> from the decomposition of the waste that occurs over the span of many years.

Solid waste generated by the Proposed Project is estimated using waste generation factors by land use, based on the analysis done for the Sacramento Entertainment and Sports Center EIR, 2014 (see Section 3.15, Utilities and Service Systems, for more information). Emissions of GHGs associated with solid waste disposal under the Proposed Project are calculated using the CalEEMod software, using the waste generation data, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted.

CalEEMod allows the input of several variables to quantify solid waste emissions. The GHG emission factors, particularly for CH<sub>4</sub>, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery) are statewide averages and are used in this assessment.

### Water and Wastewater

GHG emissions from water and wastewater are due to the required energy for supply, distribution, and treatment. Wastewater also results in emissions of GHGs from wastewater treatment systems (e.g., septic, aerobic, or lagoons) as well as from solids that are digested either through an anaerobic digester or with co-generation from combustion of digester gas.

GHG emissions from water use associated with the Proposed Project operations are calculated using CalEEMod and the Water Supply Assessment prepared for the Proposed Project, the electrical intensity factors for water supply and distribution, and the GHG emission factors for the electricity utility provider. Water-related energy intensities in CalEEMod are based on the CEC's report *Refining Estimates of Water-Related Energy Use in California*.<sup>78</sup> For more detail on the Water Supply Assessment, see Section 3.15, Utilities and Service Systems.

GHG emissions from wastewater treatment associated with the Proposed Project operations are calculated using CalEEMod and wastewater generation rates from LACSD, based on the

---

<sup>78</sup> California Energy Commission, *Refining Estimates of Water-Related Energy Use in California*, PIER Final Project Report, CEC-500-2006-118, 2006. Available: [ HYPERLINK "<https://www.energy.ca.gov/2006publications/CEC-500-2006-118/CEC-500-2006-118.pdf>" ]. Accessed April 5, 2019.

maximum daily seating capacity for the arena and by square footage for all other proposed structures within the Project Site. Emissions are quantified using default CalEEMod emission factors for the type of wastewater treatment process and the GHG emission factors for the electricity utility provider. For more information on the operational wastewater generation estimates, see Section 3.15, Utilities and Service Systems.

### Area Sources

The emissions of GHGs associated with the Proposed Project's area sources are calculated using the CalEEMod software. The emissions for landscaping equipment are based on the size of the Proposed Project's various land uses, the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted. CalEEMod uses landscaping equipment GHG emission factors from CARB's OFFROAD model and CARB's *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)* where commercial landscape equipment emission factors are multiplied by the Project's non-residential building square footage and residential landscape equipment emission factors are multiplied by the Project's residential square footage.<sup>79</sup>

Annual GHG emissions from landscaping equipment in units of MTCO<sub>2</sub>e are generally calculated in CalEEMod as follows:

#### Landscaping Equipment:

$$\text{Annual Emissions [MTCO}_2\text{e]} = \left( \sum_i (\text{Units} \times \text{EF}_{\text{LE}} \times \text{A}_{\text{LE}} \times \text{GWP})_i \right) \div 10^6$$

Where:

Units	=	Number of land use units (same land use type) [1000 sqft]
EF <sub>LE</sub>	=	GHG emission factor [grams (g)/1000 sqft/day]
A <sub>LE</sub>	=	Landscaping equipment operating days per year [day/year]
GWP	=	Global warming potential [CO <sub>2</sub> = 1, CH <sub>4</sub> = 25, N <sub>2</sub> O = 298]
10 <sup>6</sup>	=	Conversion factor [g/MT]
<i>i</i>	=	Summation index

### Stationary Sources

Stationary sources would include ~~XX~~ on-site emergency generators. Emissions associated with periodic maintenance and testing of the emergency generators are estimated separately outside of the CalEEMod software. The emergency generator emissions are calculated based on compliance with the Tier 4 emissions standards and compliance with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines)

<sup>79</sup> California Air Resources Board, 2003. OFFROAD Modeling Change Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment, June 13, 2003. Available: [ HYPERLINK "https://ww3.arb.ca.gov/msei/2001\_residential\_lawn\_and\_garden\_changes\_in\_eqpt\_pop\_and\_act.pdf" ]. Accessed April 5, 2019.

mandated emission limits and operating hour constraints. Rule 1470 applies to stationary compression ignition engine greater than 50 brake horsepower and sets limits on emissions and operating hours. In general, new stationary emergency standby diesel-fueled engines greater than 50 brake horsepower are not permitted to operate more than 50 hours per year for maintenance and testing. In general, stationary-source emergency generator emissions are calculated as follows:

Stationary Source Emergency Generator:

$$\text{Emissions}_{\text{Diesel}} [\text{g}] = \sum_i (\text{EF} \times \text{Pop} \times \text{HP} \times \text{Load} \times \text{Activity})_i$$

Where:

EF	=	Emission factor [g/bhp-hr]
Pop	=	Population [quantity of same equipment type]
HP	=	Maximum rated horsepower [hp]
Load	=	Load Factor [dimensionless]
Activity	=	Hours of operation [hours per day, hours per year]
<i>i</i>	=	Summation index

**Project Design Features**

The Proposed Project would be designed and constructed to meet the US Green Building Council’s Leadership in Energy and Environmental Design (LEED) Gold certification requirements. LEED provides a level of flexibility for projects to choose the exact credits and project features that reduce energy and water use, promote resource conservation through redevelopment and the sourcing of local construction materials, and to create healthier indoor environments. The Proposed Project’s design is in the conceptual stage, so the exact LEED credits and project features that would be selected to achieve LEED Gold certification (i.e., 60-79 LEED points) are not yet finalized. Based on the AB 987 application, the Proposed Project’s design features related to LEED certification could include the following:<sup>80</sup>

*Location and Transportation.* The Proposed Project would be eligible for credits in the location and transportation category in the following areas: (1) the Project Site has access to high quality transit, (2) the Proposed Project would include bicycle and electric vehicle charging facilities, and (3) the Proposed Project would minimize its parking footprint to meet LEED credit criteria.

The Proposed Project would be eligible to achieve the Access to Quality Transit credit because local transit service to the Project Site would be provided by the Los Angeles Metropolitan Transportation Authority (Metro) in the form of future below- and at-grade light rail on the Metro Crenshaw/LAX Line, which is currently under construction and expected to be complete in 2019,

<sup>80</sup> Murphy’s Bowl LLC, 2018. *AB 987 Application for the Inglewood Basketball and Event Center, Attachment G: Greenhouse Gas Analysis.* November 2018.

and above-ground route bus services. The Proposed Project would provide shuttle pick-up and drop-off service at the following three Metro rail stations: the existing Metro Green Line - Hawthorne Station, and the future Metro Crenshaw/LAX Line – Florence/La Brea Station and Metro Crenshaw/LAX Line – AMC 96th Street Stations. In addition, the Proposed Project is located within ¼ mile of 8 existing Metro bus stops along the following four Metro routes, 117, 211, 212, and 312.

The Proposed Project would also provide electric vehicle charging stations for 8 percent of parking spaces, which would exceed the requirements for the Proposed Project to be eligible for the Green Vehicles credit.

*Sustainable Sites.* The Proposed Project would be eligible for credits for rainwater management, open space, heat island reduction, and light pollution reduction. Credits for open space are based on the percentage of permeable surfaces, including roof-top gardens.

*Water Efficiency.* The Proposed Project would be eligible for credits for the use of ultra-low flow fixtures in restrooms such as low flow faucets with aerators, dual flush toilets, and waterless urinals. These features would reduce indoor water use by a minimum of 40 percent and would be required to meet Universal Plumbing Code standards. The Proposed Project would also be eligible for credits for using 100 percent recycled water to service project landscaping designed for low water usage.

*Energy and Atmosphere.* The Proposed Project would be eligible for credits for optimized performance and renewable energy production. The Proposed Project would include a 700-kilowatt (kW) PV system, generating approximately 1,085,000 kWh of carbon-free energy annually. The Proposed Project will also implement the following energy efficiency measures: Title 24 compliance; use of 100 percent light emitting diode (LED) lighting indoors and outdoors throughout the site; and implementation of high efficiency HVAC-related strategies. In addition, the Proposed Project’s design would include compliance with CalGreen Code Voluntary Tier 1, which is estimated to achieve a 10 percent reduction in energy consumption over Title 24 2019 standards based on the preliminary design of the Proposed Project.

*Materials and Resources.* The Proposed Project would be eligible for credits for Construction and Demolition Waste Management and sourcing of raw materials. The Proposed Project would recycle at least 75 percent of demolition materials, which exceeds the City of Inglewood’s target of 50 percent demolition waste recycling and is in accordance with State diversion targets that aim to divert a minimum of 75 percent of construction and demolition materials from landfill disposal.

*Indoor Environmental Quality.* The Proposed Project would be eligible for credits for enhanced indoor and outdoor air quality, and would meet American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 62.1:2010 indoor air quality requirements and ASHRAE 55 thermal comfort requirements.

*Innovation.* The Proposed Project would be eligible for innovation credits. Innovative strategies include the following: implementation of the FanFirst/Occupant Comfort Survey,<sup>81</sup> green education program, LEED Operations + Management (O+M) Starter Kit (Pest Management and Green Cleaning Program), and the purchasing of 100 percent LED lamps.

---

<sup>81</sup> FanFirst Connected Comfort utilizes real time crowdsourced feedback during an event to adjust temperature in the arena bowl to increase fan comfort and reduce over cooling/wasted energy.