3.7 Greenhouse Gas Emissions

This section addresses the potential impacts of greenhouse gas (GHG) emissions from the Proposed Project. 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 plans, policies, and 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 GHG emissions that were raised in comments on the NOP 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_2e) over a 100-year period, by applying the appropriate global warming potential (GWP)

value.[1] By using the applicable GWP for each GHG, Project-related emissions can be tabulated in the common unit of metric tons per year CO_2e. 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)[2] and Fifth Assessment Report (AR5),[3] published in 2007 and 2014, respectively. California Air Resources Board (CARB) uses the AR4 GWPs in the statewide GHG emissions inventory,[4] in the current Climate Change Scoping Plan,[5] and in the current version of the California Emissions Estimator Model (CalEEMod)[6] that is used to calculate CO_2e 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_2): CO_2 is the most abundant anthropogenic GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO_2 is the reference gas (GWP of 1) for determining the GWPs of other GHGs. CO_2 accounted for approximately 83 percent of anthropogenic GHG emissions (CO_2e) in California in 2016.

Methane (CH_4): CH_4 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_4 is 25 in the IPCC AR4. CH_4 accounted for approximately 9 percent of anthropogenic GHG emissions (CO_2e) in California in 2016.

Nitrous Oxide (N_2O): N_2O 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_2O is 298 in the IPCC AR4. N_2O emissions accounted for approximately 3 percent of anthropogenic GHG emissions (CO_2e) in California in 2016.

---

1 GWPs and associated CO_2e 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.

2 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.

3 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:/. Accessed March 10, 2019.

4 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.

5 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. Accessed March 9, 2019. November, 2017.

6 Version 2016.3.1, Available: 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_2e) 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_6): SF_6 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_6 has a GWP of 22,800 in the IPCC AR4. SF_6 emissions accounted for less than 1 percent of anthropogenic GHG emissions (CO_2e) 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 Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report (AR5)* states that is extremely likely that the dominant cause of the observed warming since the mid-20th century is the anthropogenic increase in GHG concentrations.[7] 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.[8]

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

7 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:/. Accessed March 10, 2019.

8 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.[9] 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*[10] 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*.[11] 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.[12]

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.[13] 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,[14] while the 20 warmest years have occurred over the past 22-year period.[15]

---

9 California Governor's Office of Planning and Research, 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.

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

11 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.

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

13 Cal-Adapt. Available: [HYPERLINK "http://cal-adapt.org"]. Accessed March 10, 2019.

14 National Oceanic and Atmospheric Association, Assessing the US Climate in 2018. https://www.ncei.noaa.gov/news/national-climate-201812. Accessed April 25, 2019. Published February 6, 2019.

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

The Fourth Assessment indicates that average temperatures in California cold rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions.[16] 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.[17]

Wildfires

The hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. One study found that, if GHG emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and the average area burned statewide each year would increase by 77 percent, by the year 2100. 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.[18]

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, 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.[19] 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.[20]

---

16 Governor's Office of Planning and Research, 2018. *California's Fourth Climate Change Assessment: Statewide Summary Report*. August 2018.

17 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.

18 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.

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

20 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.

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 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.[21]

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. Sea level could rise as much as two feet along most of the US coastline. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.[22]

Agriculture

California has a massive agricultural industry that represents 11.3 percent of total US agricultural revenue. Higher CO_2 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."[23]

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

---

21 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.

22 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.

23 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.

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.[24] Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. 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.[25]

Existing Conditions

Global Emissions

Global estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change (UNFCCC). Worldwide man-made emissions of GHGs were approximately 49 billion metric tons CO_2e in 2010, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (e.g., deforestation). Emissions of carbon dioxide (CO_2), primarily from fossil fuel use and industrial processes, account for 76 percent of total GHG (CO_2e) emissions. Methane emissions account for 16 percent and N_2O emissions for 6.2 percent. Worldwide emissions of GHGs in 1970 were 27 billion metric tons of CO_2e per year.[26]

US Emissions

In 2017, the United States emitted about 6,457 million metric tons (MMT) of CO_2e, with 76.1 percent of those emissions coming from fossil fuel combustion. Of the major sectors nationwide, transportation accounts for the highest amount of GHG emissions (approximately 29 percent), followed by electricity (28 percent), industry (22 percent), agriculture (9 percent), commercial buildings (6 percent), and residential buildings (5 percent). Between 1990 and 2017, total US GHG emissions rose by 1.3 percent, but emissions have generally decreased since peaking in 2005. Since 1990, US emissions have increased at an average annual rate of 0.4 percent.[27]

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_2e ($MMTCO_2e$) including emissions resulting from

---

[24] 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.

[25] 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.

[26] Intergovernmental Panel on Climate Change (IPCC), 2014. *Climate Change 2014 Synthesis Report.* Available: http://ipcc.ch/report/ar5/syr/. Accessed March 10, 2019.

[27] U.S. Environmental Protection Agency (U.S. EPA), 2019. Inventory of U.S. Greenhouse Gas Emissions and Sinks Fast Facts. Available: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-fast-facts. Accessed April 25, 2019.

imported electrical power.[28] Between 1990 and 2016, the population of California grew by approximately 9.4 million (from 29.8 to 39.2 million).[29] 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 $2.26 trillion in 2016 representing an increase of approximately 292 percent (almost three times the 1990 gross state product) in today's dollars.[30] 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 Greenhouse Gas 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.

TABLE 3.7-1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS

Category	Total 1990 Emissions using IPCC SAR ($MMTCO_2e$)	Percent of Total 1990 Emissions	Total 2016 Emissions using IPCC AR4 ($MMTCO_2e$)	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 [a]	–	–	8.8	2%
High GWP/Non-Specified [b]	1.3	<1%	19.8	5%
Agriculture/Forestry	23.6	[=b10/b12*100 \# "0%"]	33.8	8%
Forestry Sinks	-6.7	-2%	-- [c]	--
Net Total (IPCC SAR)	**426.6**	**100%** [e]	--	--
Net Total (IPCC AR4) [d]	**431**	**100%** [e]	**429.4**	**100%** [e]

NOTES:
[a] Included in other categories for the 1990 emissions inventory.
[b] High GWP gases are not specifically called out in the 1990 emissions inventory.

[28] 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. Accessed March 10, 2019. June 22, 2018.
[29] 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.
[30] California Department of Finance, 2018. Gross State Product. Available: 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).

[c] Revised methodology under development (not reported for 2012).

[d] 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).

[e] 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 GHG emissions for the years 2005 and 2007.[31] Additionally, the City developed a community-wide inventory for 2010 as reported in the 2013 Inglewood Energy and Climate Action Plan.[32] **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 $MTCO_2e$ in 2005 to 594,273 $MTCO_2e$ in 2010.

TABLE 3.7-2
CITY OF INGLEWOOD GHG EMISSIONS BY SECTOR: 2005 TO 2010 ($MTCO_2e$)

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%
Total	**610,910**	**595,758**	**594,273**	**100%**	**-2.7%**

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

[31] 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.

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

The City's Community-wide emissions were categorized in six sectors: Transportation, Residential Energy, Commercial/Municipal Energy, Industrial Energy, Solid Waste, and Water.

- **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.

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 (on a privately-owned parcel), a motel (on a privately-owned parcel), a warehouse and light manufacturing facility (on two privately-owned parcels), a commercial catering business (on a privately-owned parcel), and a groundwater well and related facilities (on a City-owned parcel) that would be relocated on-site during Proposed Project operations.

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 existing GHG emissions at the Project Site are estimated to be approximately 1,119 $MTCO_2e$ per year, as shown in **Table 3.7-6**, generated primarily from transportation sources.

Existing Uses Relocating to Project Site

The existing off-site LA Clippers Team Offices, which are currently located at 1212 South Flower Street, Los Angeles, California, and the existing off-site LA Clippers practice and athletic training facility, which is located in the Playa Vista neighborhood within Los Angeles, at 6854 South Centinela Avenue, would be relocated to the Project Site upon completion of construction. The existing GHG emissions from off-site uses are estimated to be 1,333 $MTCO_2e$ per year, as shown in Table 3.7-6, generated primarily from transportation sources.

3.7.2 Adjusted Baseline Environmental Setting

Section 3.7, Greenhouse Gas Emissions, assumes the Adjusted Baseline as described in Section 3.0, Introduction to the Analysis. 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 project that is included in the Adjusted Baseline will be constructed and in operation prior to opening of the Proposed Project, its potential impact on global emissions would not affect the threshold of significance or the impact analysis regarding GHG emissions from the Proposed Project. For this reason, the Adjusted Baseline is not relevant to the GHG impact analysis for the Proposed Project. No other changes to the existing environmental setting related to GHG emissions would occur under the Adjusted Baseline.

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 *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497 (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 US Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and the US Environmental Protection Agency (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_2, CH_4, N_2O, HFCs, PFCs, and SF_6—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_2e 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 (NHTSA) 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 miles per gallon (mpg) (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the US EPA, a model year 2025 vehicle would emit one-half of the GHG emissions as compared to emissions from a model year 2010 vehicle.[33] California harmonized its vehicle efficiency standards through 2025 with the federal standards (see Advanced Clean Cars Program below).

In January 2017, the 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_2 standards for model years 2021 through 2026.[34] The estimated CAFE and CO_2 standards for model year 2020 are 43.7 mpg and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 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

[33] 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.

[34] Federal Register. Vol. 83, No. 165. August 24, 2018. Proposed Rules.

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 about the feasibility of meeting the existing standards.[35] As of April 9, 2019, the case was pending and oral arguments had not been scheduled.[36] Accordingly, due to the uncertainty of future federal regulations, this analysis assumes that the existing CAFE standards will remain unchanged.

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,[37] 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.

---

35 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.

36 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.

37 California Office of the Governor, 2005. Executive Order S-3-05. Available: https://www.climatechange.ca.gov/state/executive_orders.html. Accessed March 4, 2019.

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 reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 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.[38]

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 $MMTCO_2e$. 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.[39]

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.

---

[38] 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.

[39] 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.

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.[40] 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.[41] The 2017 Scoping Plan 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 $MMTCO_2e$, and that further commitments will need to be made to achieve an additional reduction of 50 $MMTCO_2e$ 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 CEC to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by 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 statewide GHG emissions (from both on-road and off-road mobile sources) and a 50 percent reduction in statewide 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
- AB 398, which extends the state Cap-and-Trade Program through 2030.

[40] 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.

[41] 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.

In the 2017 Scoping Plan Update, CARB recommends statewide targets of no more than six MT CO_2e per capita by 2030 and no more than two metric tons CO_2e per capita by 2050. CARB acknowledges that because the statewide per capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the state (including large industrial sources covered under the state's cap and trade program), they are not applicable for use at the local level. Rather, 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 Guidelines 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."[42]

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 AB 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 "covered entities"[43] (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO_2e per year), setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve reductions.[44] Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors. The statewide cap for GHG emissions from the capped sectors commenced in 2013. The cap declines over time. Facilities subject to the cap can trade permits to emit GHGs.[45]

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 require relatively more emission reductions. In other words, the Cap-and-

42 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 9, 2019. November 2017. pp. 100–101.

43 "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.

44 17 CCR §§ 95800 to 96023.

45 See generally 17 CCR §§ 95811, 95812.

Trade Program can be adaptively managed by the state to ensure achievement of California's 2020 and 2030 GHG emissions reduction mandates, depending on whether other regulatory measures are more or less effective than anticipated.

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 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. SB 97 required the CNRA to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the CEQA Guidelines, as required by SB 97. The 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.[46] 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."

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.[47] 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 GHG emissions) that provides specific requirements that will avoid or

46 California Natural Resources Agency, 2018. CEQA Guidelines Amendments, Sections 15064.4, 15183.5, 15364.5. Available: http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf. Accessed March 18, 2019.

47 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. Accessed March 15, 2019.

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 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 CNRA 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

AB 1493

In 2002, Governor Davis signed 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. In 2008, the US EPA denied the application. 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 April 2019, the waiver was still in place and the status of 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 (DOT) have adopted GHG emission standards for model year 2017 through 2025 vehicles. These standards are slightly different from the state's standards (described below in the Advanced Clean Cars 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, the national standard would achieve greater reductions nationally and is stringent enough to meet state GHG emission reduction goals.

Advanced Clean Cars 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.[48]

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 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; that by 2050, virtually all personal transportation in the state will be based on ZEVs; and that 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 15 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. The strategy 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

[48] 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.

Strategy would result in a 45 percent reduction in GHG emissions from mobile sources and a 50 percent reduction in the consumption of petroleum-based fuels.[49]

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, in recognition of the critical need to reduce emissions from the transportation sector in order to meet the GHG emissions target of SB 32.

Low Carbon Fuel Standard

In January 2007, Governor Schwarzenegger enacted Executive Order S-01-07, which mandates that the state: (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 LCFS is to lower the carbon intensity of California transportation fuel. The 2017 Scoping Plan Update calls for the LCFS to reduce fuel carbon intensity by at least 18 percent by 2030. In September 2018, CARB extended the LCFS program to 2030, making significant changes to the design and implementation of the Program including a doubling of the carbon intensity reduction to 20 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 GHG 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.[50]

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 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

[49] 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.
[50] California Air Resources Board, Sustainable Communities. Available: [HYPERLINK "https://www.arb.ca.gov/cc/sb375/sb375-rd.htm"]. Accessed April 25, 2019.

GHG emissions.[51,52] As these reduction targets were updated after SCAG adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS), it is expected that a future iteration of the RTP/SCS will be updated to reflect these targets. The proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the LCFS regulations.[53]

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 Setting, Impacts, 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."[54] 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.[55]

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

---

51 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.

52 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.

53 California Government Code Section 65080(b)(2)(A)(iii).

54 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"]. Accessed March 11, 2019.

55 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.

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, 2020.

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 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

The Clean Energy and Pollution Reduction Act of 2015, SB 350 (Chapter 547, Statutes of 2015), was approved by Governor Brown on October 7, 2015. SB 350 increased the RPS by requiring an increase in the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources from 33 percent to 50 percent by December 31, 2030. The Act also requires the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in existing electricity and natural gas final end uses of retail customers by January 1, 2030.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS, increasing required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by December 31, 2030. Incrementally, these energy providers must also have a renewable energy supply of 44 percent by December 31, 2024, and 52 percent by December 31, 2027. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

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.

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. AB 987 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 the statute potentially applies to the Proposed Project and addresses issues related to GHG emissions. However, AB 987 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, then 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.[56] 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

[56] Office of the Governor, 2018. Assembly Bill 987 Signing Message. September 30.

certain reductions in criteria air pollutant and toxic air contaminant emissions, over and above any reductions required by other laws or regulations in communities surrounding the Project Site.

Regional

SCAQMD

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 with the ambient air quality standards. This is accomplished though 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 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;
- 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.[57] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. 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

[57] 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"]. Accessed April 17, 2019.

GHG significance thresholds. This Working Group has been inactive since 2011 and the SCAQMD has not formally adopted any GHG significance threshold guidance for land use development projects.

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

As described in Section 3.10, Land Use and Planning, the 2016–2040 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, with a specific goal of 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. Consistency of the Proposed Project with the 2016–2040 RTP/SCS, including Goals 6 and 7, is discussed under Impact 3.7-2, below, as well as in Section 3.10, Land Use and Planning, Impact 3.10-2.

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[58] 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.

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 proposed 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.

[58] 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 Proposed Project's consistency with the City of Inglewood General Plan is discussed under Impact 3.7-2.

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.[59] The ECAP includes a business-as-usual (BAU) forecast that estimates future emissions in 2020 and 2035 from six sectors: Transportation, Residential Energy, Commercial/Municipal Energy, Industrial Energy, Solid Waste, and Water. The BAU forecast assumes GHG emissions that would occur in the future under regulatory conditions as they existed in 2010; the BAU forecast 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 ECAP's BAU forecast, Inglewood's total GHG emissions are expected to increase approximately 14 percent from 2010 (594,273 $MTCO_2e$) to 2035 (678,283 $MTCO_2e$). On a per-service population (SP)[60] basis, the increase is shown to be just 4.5 percent, from 4.22 $MTCO_2e$/SP in 2010 to 4.41 $MTCO_2e$/SP in 2035.

The City's GHG inventories and forecasts are summarized in **Table 3.7-3**, *City of Inglewood Community GHG Emissions by Sector: Existing and Forecasted ($MTCO_2e$)*, below.

TABLE 3.7-3
CITY OF INGLEWOOD COMMUNITY GHG EMISSIONS BY SECTOR: EXISTING AND FORECASTED ($MTCO_2e$)

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

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

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

[60] Service population = residents plus employees working within the City limits

The ECAP establishes an emissions reduction target of 15 percent below 2005 levels by 2020 and an emissions reduction goal of 32.5 percent below 2005 levels by 2035. As shown in Table 3.7-3, 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 $MTCO_2e$ per year by 2020, and 160,002 $MTCO_2e$ by year 2035. Local measures in the CAP are expected to reduce community emissions an additional 9,803 $MTCO_2e$ per year by 2020, and 10,994 $MTCO_2e$ 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 light-emitting diode (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 waste
- Promote local food production

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

3.7.4 Analysis, Impacts and Mitigation

Approach to Analysis

GHG emissions and global climate change represent cumulative impacts from human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions from all of these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts.

The following analysis of the Proposed Project's impact on climate change focuses on the Proposed Project's contribution to cumulatively significant GHG emissions. Given that the analysis of GHG emissions is only relevant in a cumulative context, this section does not include an individual project-specific impact assessment.

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:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. 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, so long as any threshold selected is supported by substantial evidence (see section 15064.7(c)), 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).

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."[61]

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'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 City plans

61 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. Accessed March 15, 2019.

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."[62] Accordingly, for the purposes of this EIR, the City used a quantitative threshold for the Proposed Project of no net additional GHG emissions, including emissions from employee transportation.

The "no net new" emissions threshold means that if the Proposed Project would not emit any additional GHG emissions beyond the baseline over its estimated 30-year life, the impact would be less than significant. Further, the "no net new" emissions threshold for the Proposed Project is consistent with the project applicant's commitment to abide by the requirements of AB 987, which stipulates that the Proposed Project would not result in any net additional emissions of GHGs compared to the baseline, including GHG emissions from employee transportation. This threshold serves as a *project-specific* GHG threshold and does not set precedent for future City projects.[63]

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

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 and the 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 would occur starting in 2024 and for analytical purposes are assumed to 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. 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." The SCAQMD recommends that construction project GHG emissions be "amortized over a 30-year

---

62 California Air Resources Board, 2017. *California's 2017 Climate Change Scoping Plan*. pp. 100-101.Available: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed March 10, 2019. November 2017.

63 Project-specific thresholds are not required to be formally adopted because the requirement for formal adoption of thresholds under 14 Cal Code Regs §15064(b) applies only to thresholds of general application.

project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies."[64]

Project Consistency with Existing Plans, Policies and Regulations

A significant impact would occur if the Proposed Project would conflict with applicable regulations, plans and policies that were adopted to reduce GHG emissions that contribute to global climate change. For the Proposed Project, as a land use development project, this analysis considers the Proposed Project's consistency with the following applicable plans, policies and regulations to reduce GHG emissions:

- The 2017 Climate Change Scoping Plan Update, CARB's plan for achieving a 40 percent reduction on GHG emissions from 1990 levels by 2030, statewide, as mandated by SB 32;
- SCAG's 2016-2040 RTP/SCS, the regional plan for achieving sustainable land use patterns that reduce passenger vehicle GHG emissions, as mandated by SB 375;
- Executive Order S-3-05, which established a goal of reducing the state's GHG emissions to 80 percent below the 1990 level by the year 2050;
- CARB's Mobile Source Strategy and Executive Order B-48-18, which are designed to achieve GHG reductions from the state's largest contributing sector (transportation), consistent with the goals of SB 32 and the 2017 Scoping Plan Update; and
- The City's ECAP.

Methodology and Assumptions

For the purpose of this analysis, baseline annual emissions include GHGs from mobile sources and energy usage resulting from the existing on-site structures that would be removed and replaced with construction of the Proposed Project, as well as the emissions from a large portion of the LA Clippers games at the Staples Center, and non-NBA events that would be "market-shifted" to the proposed Arena, as described below.

As described in Chapter 2, Project Description, this analysis assumed that an annual average of 5 pre-season, 41 regular season, and 3 post-season LA Clippers home games would be hosted at the proposed Arena (see Table 2-3), for an average of 49 games per year. The annual average number of post-season games was based on the average number of post-season home games per NBA team per year. **Table 3.7-4** provides a summary of annual events anticipated at the proposed Arena, along with estimates of the number of events that would be market-shifted from other venues within the Los Angeles region. These include the LA Clippers games currently being played at Staples Center, and non-NBA game events (e.g., concerts, family shows, non-NBA sports games, etc.) currently occurring at other arenas in the Los Angeles region, which would be relocated at the Project Site. The effect of the Proposed Project would be to shift the location

64 South Coast Air Quality Management District, 2008. Draft Guidance Document – Interim CEQA Greenhous Gas (GHG) Significance Threshold. Available: 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.

where some of these events currently occur. For this reason, the market-shifted events were considered part of the Proposed Project baseline conditions.[65]

Further, the move of LA Clippers games out of Staples Center would provide some additional open dates in the Staples Center calendar, and it is reasonable to assume that the operator of Staples Center would attempt to book events for those newly available dates. The primary dates that would be made available would be weekday and weekend evenings when no other professional sports team event is occurring. Based on evaluation of the past several years of Staples Center schedules, the analysis assumed that seven events would be backfilled at the Staples Center.

As described in Appendix K, in addition to the 47 market-shifted Clippers games, it was assumed that additional events from the wider region would be market shifted to the Arena. These additional market-shifted events include an average of 10 large events (e.g., concerts) defined as having an average of 12,000 or more attendees; 38 medium-size events with between 5,000 and 10,000 attendees; and 41 small events with less than 5,000 attendees.

TABLE 3.7-4
INGLEWOOD BASKETBALL & ENTERTAINMENT CENTER ANTICIPATED ANNUAL EVENT CHARACTERISTICS

Event Type	Anticipated Annual Frequency	Average Attendance	Maximum Attendance	Event-Day Employees[g]	Number of Market Shift Events[i]
LA Clippers Home Basketball Game	Up to 5 Preseason Games	12,000	18,000	1,320[h]	3
	41 Regular Season Games	16,000	18,000	1,320[h]	41
	3 Postseason Games[f]	18,000	18,000	1,320[h]	3
Concerts [a]	Up to 5 per year (large)	15,000	18,500	1,120[i]	4
	Up to 8 per year (medium)	12,000	14,500	795[i]	6
	Up to 10 per year (small)	7,000	9,500	530[i]	8
Family Shows [b]	Up to 20	6,000	8,500	530[i]	16
Other Events [c]	Up to 35	5,000	7,500	480[i]	14
Corporate/Community Events [d]	Up to 100	300	2,000	25[i]	41
Plaza Events [e]	Up to 16	2,400	4,000	25	0

NOTES:
a Annual number and size of concerts may vary according to market conditions and availability of the arena; these estimates represent the anticipated annual average occurrences of each concert type.
b Examples of family shows include Disney Live, Harlem Globetrotters and Marvel Universe Live.
c Examples of other sporting events include college basketball, boxing, lacrosse, arena football, or non-recurring events such as professional wrestling shows. Events could be professional, collegiate or amateur competitions. Other events could include speaking events or civic events such as local graduation ceremonies.
d Examples of corporate or community events include small conventions, conferences, cultural events, civic events and private events. Events could be hosted on the arena floor or in club, locker room and concourse space throughout the arena, or in the plaza.
e Examples of plaza events include outdoor exhibitions or festivals for arts, food, technology, or similar activities, fan appreciation days, holiday celebrations, and similar outdoor events.
f The current NBA playoff format, implemented in the 2002-03 season, involves four rounds of best-of-seven series and allows for a potential maximum of 16 home games in one season. Based on an analysis of the past playoff appearances of all current NBA teams, the anticipated average annual number of home playoff games is 3 games.

65 The incremental VMT that would be associated with relocating these events to the project site is accounted for in the Proposed Project's operational emissions.

g Estimates do not include full-time arena management and operations employees, LA Clippers basketball operations employees including players and coaches, LA Clippers employees that work in the management offices or related facilities during the day, or visiting event performers and their support staff at the arena.
h Provided by Venue Solutions Group based on a blended analysis of the Amway Center, American Airlines Arena, Madison Square Garden, and Staples Center operations; includes 1,200 non-LA Clippers employees and 120 LA Clippers employees to provide game-day operations support.
i Provided by Venue Solutions Group based on a blended analysis of the Amway Center, American Airlines Arena, Madison Square Garden, and Staples Center operations.
j Event numbers as provided in Appendix K.

The Proposed Project would include relocation of the existing off-site LA Clippers team offices, which are located approximately 11 miles northeast of the Project Site at 1212 South Flower Street in downtown Los Angeles, and the existing off-site LA Clippers practice and athletic training facility, which is located approximately 6 miles northwest of the Project Site at 6854 South Centinela Avenue in the Playa Vista neighborhood within Los Angeles. GHG emissions associated with the use of the existing team offices and the practice and athletic training facility (including travel to and from) are currently occurring, and are therefore arguably part of the existing environmental setting. GHG emissions associated with the use of the existing team offices and practice and athletic training facility would typically be included in "baseline" GHG emissions, against which Project emissions would be compared, with those emissions essentially netting out. However, 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' practice and athletic training facility, it would be speculative to assume the type of use that could reoccupy it in the future given its unique design and space allocation, but for the purposes of this analysis it was assumed that a new tenant would backfill it with a similar emissions profile. Thus, to account for the backfilling of these existing facilities, the existing emissions for backfilled events were included in the baseline, and the future emissions of new tenants were added to the emissions from the Clippers use of new facilities at IBEC.

Development of the Proposed Project would first require demolition and removal of existing buildings on six of the parcels located within the Project Site. Existing buildings within the Project Site include a 16,806 square foot (sf) motel, an 1,118 sf fast food restaurant, a 28,809 sf light manufacturing/warehouse building, an 1,134 sf commercial building, and a 6,231 sf warehouse and a groundwater well and related facilities that would be relocated on-site. While GHG emissions from the demolition of the existing groundwater well and related facilities on-site and the construction of the relocated groundwater well and related facilities was calculated and included as net new, the operational GHG emissions of the relocated groundwater well and related facilities "net out" since operations will not change once relocated.

For purposes of this analysis, the HPSP Adjusted Baseline projects would not affect GHG emissions associated with the Proposed Project and, as such, were not relevant to the impacts and thresholds related to GHG emissions associated with the Proposed Project.

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.[66] This analysis considered 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 included construction activities associated with the Proposed Project such as demolition, site preparation, excavation/grading, building construction, paving, hauling, and construction worker trips. This analysis also considered indirect GHG emissions from water conveyance, wastewater generation, and solid waste handling. Because potential impacts resulting from GHG emissions would be long-term rather than acute, GHG emissions were 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 were estimated using CalEEMod® Version 2016.3.2, which is a California based 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 land use projects of various types and in various air basins. 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.[67] Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. According to the California Air Pollution Control Officers Association, the model is an established, accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[68]

CalEEMod uses CARB's approved on-road and off-road equipment emission models including the EMission FACtor model (EMFAC) and ARB In-Use Off-Road Equipment model (OFFROAD2011), and studies commissioned by California agencies such as the California Energy Commission and CalRecycle. OFFROAD is an emission factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment, agricultural equipment). The off-road diesel emission factors used in CalEEMod are based on the CARB OFFROAD2011 program. EMFAC is an emission factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles). The emission factors used in CalEEMod are based on the CARB EMFAC2014 program. CARB has released an updated EMFAC2017 version that includes various updates, notably the incorporation of USEPA and CARB regulations and

66 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, p. 8. Accessed March 2019.

67 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.

68 California Air Pollution Control Officers Association, California Emissions Estimator Model, 2017. [HYPERLINK "http://www.aqmd.gov/caleemod/"], Accessed April 25, 2019.

standards (e.g., Advanced Clean Cars and the Truck and Bus Rule). To more accurately assess the mobile GHG emissions, EMFAC2017 emission factors were used in the analysis.

Emissions from Existing Operations

Existing operations at the Project Site and at the LA Clippers' current off-site team offices and practice and athletic training facility generate GHG emissions from energy (electricity and natural gas), on-road motor vehicles (mobile), solid waste, water and wastewater, and area sources, as described further below.

Energy

The existing operations consume energy (electricity and natural gas) for multiple purposes including, but not limited to, building heating and cooling, lighting, and electronics. The existing buildings on the Project Site and the off-site team offices and the practice and athletic training facility were built before 2005. Thus, building energy consumption for these facilities was based on CalEEMod historical (pre-2005) electricity and natural gas usage rates per CalEEMod instructions.[69] For pre-2005 buildings, CalEEMod bases its energy usage estimates on the CEC's California Commercial End-Use Survey (CEUS), which lists energy demand by building type based on data from 2002.[70]

For on-site existing land uses, electricity is supplied by Southern California Edison (SCE) and natural gas is supplied by Southern California Gas Company. CalEEMod provided default CO_2e intensity factors for natural gas and for SCE-supplied electricity. The CalEEMod default CO_2e intensity factor for SCE-provided electricity, 705 pounds CO_2e/MWh (0.320 $MTCO_2e$/MWh), is based on the SCE portfolio in 2012.[71] However, as described in Section 3.7.3, California's Renewables Portfolio Standard, mandates that publicly owned electric utilities procure an increasing percentage of their total sales from renewable power sources, with a 2020 goal of 33 percent qualifying renewables. SCE's average power mix in 2017 included 32 percent qualified as renewable under the RPS.[72] SCE's progress in meeting its 2020 RPS obligation is reflected in its decreasing average CO_2e intensity factor since 2012. For 2016 and 2017, SCE reports average CO_2e intensity factors for its total electricity mix as 0.259 and 0.232 $MTCO_2e$/MWh, respectively.[73] Thus, the analysis of onsite existing operations emissions used

---

69 California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, 2017. [HYPERLINK "http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4"], Accessed April 25, 2019.

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

71 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.

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

73 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.

SCE's 2017 CO_2e intensity factor for electricity rather than the CalEEMod default, because that was the most recent SCE emission factor available.

For the off-site team offices and practice and athletic training facility, electricity is supplied by Los Angeles Department of Water and Power (LADWP) and natural gas is supplied by Southern California Gas Company. For quantifying energy emissions from the off-site team offices and practice and athletic training facility, a 2017 intensity factor for LADWP-supplied electricity (0.334 $MTCO_2e$/MWh) was provided through direct correspondence with LADWP.[74]

For estimating electricity emissions for the Proposed Project through the expected life of the project, CO_2e intensity factors were projected for each operational year through 2054, based on RPS compliance, as shown in **Table 3.7-5**. Annual operational emissions account for the anticipated change over time in CO2e intensity factors for electricity (due to the RPS) and mobile sources (due to state regulations for vehicle efficiency). Consistent with estimates of operational emissions over the life of the Project, estimates of electricity emissions associated with the existing on-site and off-site uses were adjusted through the year 2054, as shown in Table 3.7-9, using projected CO_2e intensity factors for each operational year, based on RPS compliance (see Table 3.7-5).

TABLE 3.7-5
EMISSION FACTORS OVER TIME

Year	RPS Mandate	SCE Electricity Emission Factor ($MTCO_2e$/MWh)[a]	LADWP Electricity Emission Factor ($MTCO_2e$/MWh)[a]	Mobile Source Running Exhaust Emissions Factor: Aggregate (g CO_2e/mile)[b]
2020	**33%**	0.229	0.334	392
2021		0.219	0.321	382
2022		0.210	0.307	371
2023		0.200	0.293	359
2024	**44%**	0.191	0.279	350
2025		0.182	0.266	340
2026		0.173	0.253	331
2027	**52%**	0.164	0.239	323
2028		0.155	0.226	315
2029		0.146	0.213	308
2030	**60%**	0.136	0.200	302
2031		0.127	0.186	297
2032		0.118	0.173	292
2033		0.109	0.160	288
2034		0.100	0.146	284
2035		0.091	0.133	281
2036		0.082	0.120	279
2037		0.073	0.106	276
2038		0.064	0.093	274

74 Edgar Mercado, LADWP, Email correspondence with ESA, April 5, 2019.

Year	RPS Mandate	SCE Electricity Emission Factor ($MTCO_2e/MWh$)[a]	LADWP Electricity Emission Factor ($MTCO_2e/MWh$)[a]	Mobile Source Running Exhaust Emissions Factor: Aggregate (g CO_2e/mile)[b]
2039		0.055	0.080	273
2040		0.045	0.067	271
2041		0.036	0.053	270
2042		0.027	0.040	270
2043		0.018	0.027	269
2044		0.009	0.013	268
2045	**100%**	**0.000**	**0.000**	268
2046		0.000	0.000	268
2047		0.000	0.000	268
2048		0.000	0.000	268
2049		0.000	0.000	268
2050		0.000	0.000	268
2051		0.000	0.000	268
2052		0.000	0.000	268
2053		0.000	0.000	268
2054		0.000	0.000	268

NOTES:

[a] See Appendix G for derivation of electricity emission factors for RPS milestone years; emission factors for other years are derived using linear interpolation.

[b] Based on EMFAC 2017; Aggregate emission factors are provided to illustrate the expected decreasing emissions intensity of vehicles over time. See Appendix G for derivation of mobile source emission factors used in the analysis, which accounted for emission factors specific to vehicle classes and vehicle speeds.

SOURCE: ESA, 2019.

For quantifying emissions from natural gas usage, CalEEMod calculated operational GHGs emissions using CalEEMod's default CO_2e intensity factor for natural gas combustion.

Mobile Sources

Mobile source GHG emissions associated with existing operations were calculated using EMFAC2017 emission factors and the estimated VMT for existing uses as presented in Section 3.14, Transportation and Circulation. Emissions modeling was conducted using the vehicle fleet mix for the South Coast Air Basin as provided in the EMFAC models, and South Coast Air Basin-specific vehicle fleet emission factors for 2018 in units of grams or metric tons per mile.

Consistent with estimates of operational emissions over the life of the Project, estimates of mobile emissions associated with the existing on-site and off-site uses were adjusted through the year 2054, as shown in Table 3.7-9, using EMFAC 2017's projected mobile CO2e intensity factors for each operational year (see Table 3.7-5).

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_2 and CH_4 from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal from existing onsite operations were calculated using the CalEEMod model, using waste generation values by land use as provided in Section 3.15, Utilities and Service Systems, and the CalEEMod GHG emission factors for solid waste decomposition. Solid waste generation rates for existing off-site team offices and practice and athletic training facility were also estimated based on generation rates by land use as provided in Section 3.15, Utilities and Service Systems, and the CalEEMod GHG emission factors for solid waste decomposition. A waste diversion rate of 50 percent was used, consistent with State regulations.

The CalEEMod model allows the input of several variables to quantify solid waste emissions. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. In CalEEMod the default values for landfill gas capture (e.g., no capture, no flaring, no energy recovery) are statewide averages and were used in this assessment to provide a conservative analysis.

Water and Wastewater

GHG emissions from water and wastewater are a result of the required energy for supply, distribution, and treatment. Wastewater generation 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 existing operations at the Project Site were calculated using CalEEMod and the Water Supply Assessment prepared for the Proposed Project (see Appendix M), the electrical intensity factors for water supply and distribution, and the GHG emission factors for the electricity utility provider. Water usage rates for existing off-site team offices and practice and athletic training facility were also estimated based on usage rates by land use as described in the Water Supply Assessment prepared for the Proposed Project (see Appendix M). GHG emissions from water use were calculated using CalEEMod's electrical intensity factors for water supply and distribution and the appropriate GHG emission factor for the electricity utility provider.[75] For more detail on Water Supply impacts of the Proposed Project, see Section 3.15, Utilities and Service Systems, and Appendix M.

[75] Water-related energy intensities in CalEEMod are based on the California Energy Commission report, *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.

Area Sources

Area source emissions associated with existing operations include landscaping equipment. The emissions for landscaping equipment were estimated using CalEEMod, 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 the CARB OFFROAD model and CARB's *Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment (6/13/2003)*.[76] In the South Coast Air Basin CalEEMod estimates that landscaping equipment operates for 250 days per year.

Stationary Sources

As a conservative approach, it is assumed that the existing operations do not include emergency generators as a source of GHG emissions. Thus, the GHG emissions from generators in the Proposed Project were treated as net new GHG emissions.

Project Construction Emissions

Construction of the Proposed Project would result in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O from construction equipment and mobile sources such as haul trucks and worker vehicles. Construction emissions were calculated for each year of construction activity using CalEEMod and applying emission factors from EMFAC2017 to calculate mobile source emissions. Construction emissions were forecasted based on an expectation that construction of the Proposed Project would occur in several overlapping phases over approximately 40 months, from July 2021 through October 2024. This is a conservative approach that assumes all construction occurs at the earliest feasible date.

The CalEEMod software provides options for specifying equipment, horsepower ratings, load factors, and operational hours per day. Project-specific information about equipment types and the current anticipated construction schedule, including construction equipment lists for each phase of construction activity, was provided by the project applicant. 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, but ranged from 4 hours to 21 hours per day to conservatively estimate the Proposed Project's maximum emissions. These values were applied to the same construction equipment and phasing assumptions used in the criteria air pollutant analysis (see Section 3.2, Air Quality, of this EIR) to generate GHG emissions values for each construction year.

The indirect emissions from electricity used by two 2,500 square foot construction offices were estimated using CalEEMod default energy consumption factors and an estimated SCE CO_2e intensity factor for year 2021 (start of construction).

---

[76] 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 electricity needed to convey water for dust control was estimated based on site acreage, estimated days of water use, US Department of Energy irrigation rates and CalEEMod default electricity intensity factors for water supply, treatment, and distribution.[77,78] Water conveyance for dust control was assumed to occur prior to building construction at each site. GHG emissions associated with dust control were estimated based on the total electricity use multiplied by the SCE emissions intensity factor for year 2021 (start of construction).

As explained above in "Approach to Analysis", GHG emissions from construction were amortized over the 30-year lifetime of the Proposed Project.

Project Operational Emissions

Operational emissions associated with the Proposed Project would include emissions from energy use (electricity and natural gas), on-road motor vehicles (mobile), electric off-road motor vehicles (e.g. forklifts and aerial lifts), solid waste, water and wastewater, area sources (landscaping), and on-site stationary sources (emergency generators and a cooling tower). Detailed methodology for each emission source is presented below.

The operational life of the Proposed Project was assumed to be 30 years, consistent with SCAQMD guidance. Accordingly, operational emissions were estimated from the anticipated start of operations at the Proposed Project during the 3rd quarter of 2024 through 2054, using the CalEEMod software and on-road vehicle emissions factors from the EMFAC2017 model. CalEEMod was used to estimate GHG emissions from electricity, natural gas, solid waste, water and wastewater, and landscaping equipment. Emissions estimates for on-road mobile sources were based on VMT data provided in Appendix K.

Energy

The Proposed Project would consume energy (electricity and natural gas) for multiple purposes including, but not limited to, building heating and cooling, lighting, and electronics. For all land uses, building electricity and natural gas usage rates were based on CalEEMod defaults for building types (e.g., arena, office, hotel, retail/restaurant and parking), adjusted to account for the Proposed Project's expected compliance with 2019 Title 24 building energy efficiency standards. The Proposed Project's electricity would be supplied by SCE and natural gas is supplied by Southern California Gas Company.

Because lighting and air handling would be controlled by zone within the proposed Arena, it is estimated that large events (12,000 or more attendees) require full arena energy demand, medium

---

77 Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day. U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. p. 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements.

78 CAPCOA, CalEEMod User's Guide for CalEEMod Version 2016.3.2, Appendix D, Default Data Tables, Table 9.2. [HYPERLINK "http://www.aqmd.gov/caleemod/user's-guide"]. Accessed July 31, 2019.

events (between 5,000 and 10,000 attendees) require 80 percent of the full arena energy demand and small events (less than 5,000 attendees) required 25 percent of the full arena energy demand. It was assumed that the 16 plaza events require 0 percent of arena energy demand because the Arena would not be in use.

For electricity usage, CalEEMod calculated 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 CO2e intensity factors for natural gas and for SCE-supplied 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 mandated 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 are expected to steadily increase their renewable resources for energy production. This assumption is appropriate because utilities have steadily increased the percentage of energy obtained from renewable resources in response to existing mandates. 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 through the expected life of the project, CO_2e intensity factors were projected for each operational year through 2054, based on RPS compliance, as shown in Table 3.7-5.

In addition to electricity used for regular building operations, the electricity used by media vans parked at the proposed Arena was also calculated. Media vans would use a direct line hookup to draw electricity for use to power parked vehicles. The analysis assumed a maximum of 18 media vans (equal to the total number of media van parking spaces) operating four hours per day for each basketball game taking place at the proposed Arena (49 games total per year). Electricity generation was calculated by assuming media vans would require the equivalent of a 50 horsepower generator to operate, converting the horsepower to kilowatts, and then multiplying by the hours per day and days per year to approximate the total kilowatt-hours per year.

The GHG emissions associated with the Proposed Project's operational off-road equipment were calculated using default equipment data for horsepower and load factor. The operational equipment would include aerial lifts and forklifts operating twice a week for five hours per day for deliveries at the Arena Site loading zone. All operational equipment would be electric-powered and associated emissions were calculated by converting the total horsepower-hours to kilowatt-hours and calculating annual emissions using SCE energy intensity factors from 2024 through 2054.

For natural gas usage, CalEEMod was used to calculate 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 was based on data from the CEUS, which lists energy demand by building type.[79] However, since the data from the CEUS is from 2002, correction factors were 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

As described in Section 3.14, Transportation and Circulation, the Proposed Project operations would include vehicle trips related to LA Clippers games and other events at the Arena, commute trips by employees of the Arena and all trips associated with the ancillary development land uses (including office, training facilities, and sports medicine clinic employee trips and delivery truck trips).

Mobile source emissions were calculated using VMT data, which takes into account mode (vehicle trip types including private attendee vehicles, transportation network company (TNC) vehicles, employee vehicles, shuttles, and miscellaneous vehicles), ridership (occupancy per vehicle), and trip lengths, as provided in Appendix K.

As discussed in Section 3.2, Air Quality, vehicles traveling at lower speeds have higher emission rates. For the Proposed Project arena land use and associated events-related VMT, trips lengths were separated into three trip length segments with different vehicle speeds to account for travel on residential and business district roadways, freeways and the local study area (for additional details regarding trip length segments and speed derivations see Section 3.2, Air Quality and Appendix D). For the Proposed Project ancillary uses-related VMT, as provided in Appendix K, vehicles emissions were modeled using the average speed for all vehicle travel in the SCAQMD region as determined through EMFAC2017 (for additional information on trip length and speed derivation to select mobile emissions factors, please refer to Section 3.2, Air Quality, Regional Operational Emissions Methodology).

Mobile source emissions are the product of the estimated VMT and the emission factors representative of the vehicle fleet as shown in Appendix K. Emission factors for CO_2, CH_4, and N_2O were obtained from EMFAC2017 for the SCAQMD.[80] For vehicle trips associated with the arena land use, the on-road vehicle trips associated with spectators, event-day staff, and employees would be primarily passenger vehicles, so the default SCAQMD 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 on-road trips associated with TNC vehicles, the default SCAQMD fleet mix was adjusted for a TNC vehicle fleet mix of light-duty autos, light duty trucks, and medium-duty vehicles to estimate TNC fleet-average emission factors. For on-road vehicle trips associated with shuttles used to transport attendees and employees, the default SCAQMD fleet mix was adjusted for a shuttle fleet mix of

[79] California Energy Commission, California Commercial End-Use Survey, http://capabilities.itron.com/CeusWeb/ChartsSF/Default2.aspx. Accessed April 25, 2019.

[80] 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.

light-heavy duty trucks to estimate shuttle fleet-average emission factors. For on-road vehicle trips associated with miscellaneous vehicles, the default SCAQMD fleet mix was adjusted for a miscellaneous vehicle fleet mix of medium-heavy duty and heavy-heavy duty trucks to estimate miscellaneous vehicle fleet-average emission factors. For ancillary land uses, including the hotel and restaurant/retail land uses, the default SCAQMD fleet mix was used to estimate fleet-average emission factors.

Delivery truck emissions generated by traveling to and from the Project Site, as well as on-site idling, were based on the proposed loading dock capacity at the proposed Arena and emission factors from EMFAC2017. As a conservative assumption, the maximum number of delivery trucks were assumed based on the proposed Arena's loading dock capacity and with half of the delivery trucks consisting of Transport Refrigeration Units (TRUs) to account for trucks transporting goods that require refrigeration. Delivery trucks emissions were based on twenty-two truck deliveries per day with half containing TRUs, where emissions were calculated with emission factors from CARB.[81,82]

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 derived from EMFAC2017 for each year after 2024 (first operational year) through 2050. To illustrate this change over time, the annual aggregate emission factor for all vehicle classes through 2054 is shown in Table 3.7-5. 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_2 and CH_4 from the decomposition of the waste that occurs over the span of many years.

Solid waste generated by the Proposed Project was estimated using waste generation values by land use as provided in Section 3.15, Utilities and Service Systems. Emissions of GHGs associated with solid waste disposal under the Proposed Project were 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.

---

81 California Air Resources Board, 2011. Staff Report: 2011 Amendments for the Airborne Toxic Control Measure for In-USE Diesel Fueled TRUs and TRU Generator Sets, and Facilities where TRUs Operate, August 2011. CARB does not provide emission factors beyond 2050 for TRUs; thus, emissions associated with TRUs were conservatively assumed to remain constant from 2050 through 2054.

82 California Air Resources Board, 2012, Final Regulation Order, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities where TRUs Operate, October 2012.

CalEEMod allows the input of several variables to quantify solid waste emissions. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. CalEEMod's default values for landfill gas capture (e.g., no capture, flaring, energy recovery), based on statewide averages, were used in the assessment. A waste diversion rate of 50 percent was used, consistent with State regulations.

Water and Wastewater

GHG emissions from water use and wastewater associated with the Proposed Project operations were 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, and Appendix M.

Area Sources

The GHG emissions associated with the Proposed Project's area sources were calculated using the CalEEMod model. The emissions for landscaping equipment were based on the Proposed Project's 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.[83]

Stationary Sources

Stationary sources would include two on-site emergency generators and two emergency fire pumps. Emissions associated with periodic maintenance and testing of the emergency generators were estimated separately from the CalEEMod model. The emergency generator emissions were calculated based on compliance with the applicable federal emissions standards and compliance with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) 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.

Stationary sources would also include an on-site cooling tower to assist in dissipating heat from commercial processes, such as commercial heating, ventilation and air conditioning (HVAC) systems, of the Proposed Project. The cooling tower would utilize a flow rate of 4,800,000

[83] 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.

gallons per year (refer to the Water Supply Assessment prepared for the Proposed Project and Appendix M). The cooling tower would require energy to supply, distribute, and treat the water. The emissions associated with this energy use were estimated based on the default energy demand factors in the CalEEMod software.

Emissions from Market Shift Events

Mobile Sources

Mobile source GHG emissions associated with market shifted events from the region were calculated using EMFAC2017 emission factors and the VMT data presented in Appendix K, using the same mix of vehicles and vehicle speeds that were used for the Air Quality analysis in Section 3.2.

As with operational emissions, emission factors for mobile source emissions associated with market shifted events were assumed to decrease in future years due to fleet turnover and regulations such as Advanced Clean Cars Program. Therefore, emission estimates for future years were based on factors derived from EMFAC2017 for each year after 2024 (first operational year) through 2050. EMFAC2017 does not provide emission factors beyond 2050; thus, emissions associated with mobile sources were assumed to remain constant through 2050 and 2054.

Energy

For market shifted events (see Table 3.7-4), electricity and natural gas use is based on CalEEMod defaults for land use type and facility square footage, which are based on the 2016 Title 24 energy efficiency standards. The 2016 standards are assumed to be appropriate for the market-shifted Staples Center operations for the 47 shifted NBA games because of the $20 Million energy upgrade project that was completed for the arena in 2016. To match assumptions in Appendix K, the Staples Center also served as a proxy for a regional event venue, which serves as the arena use modeled for the non-NBA shifted events. As shown in Table 3.7-4, non-NBA shifted events include 10 large events, 38 medium-size events, and 41 small events. As with Proposed Project operations, it was assumed that large events would require full arena energy demand; medium events (between 5,000 and 10,000 attendees) would require 80 percent of the arena energy demand; and small events (less than 5,000 attendees) would require 25 percent arena energy demand.

CalEEMod calculated GHG emissions based on the estimated electricity usage, the GHG emission factors for the electricity utility provider (LADWP), and the GWP values for the GHGs emitted. As with existing off-site emissions, estimates for future electricity emissions were based on the forecasted emission factor for LADWP-supplied electricity.

Solid Waste

Solid waste generated by the market shifted NBA games from the Staples Center and the market shifted events shifted at the regional event venue was estimated using waste generation factors from the analysis done for the Sacramento Entertainment and Sports Center EIR, 2014 (see Section 3.15, Utilities and Service Systems, for more information). A diversion rate of 50 percent

was assumed for all market shifted events, consistent with state regulations. Emissions were calculated using CalEEMod default factors for solid waste decomposition, and the GWP values for the GHGs emitted. Similar to energy use, it was assumed that large events (12,000 or more attendees) would generate 100 percent of the solid waste generated by a full arena; medium events (between 5,000 and 10,000 attendees) would generate 80 percent of the waste generated by a full arena; small events (less than 5,000 attendees) would +generate 25 percent of the solid waste generated by a full arena.

Water and Wastewater

Water usage rates for market shifted events were estimated based on event employee and visitor water usage rates from the Water Supply Assessment prepared for the Proposed Project (see Appendix M). GHG emissions from water use were calculated using CalEEMod's 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 and Appendix M.

Area Sources

The GHG emissions associated with area sources for market shifted events were calculated using CalEEMod defaults for the arena land use type and facility square footage.

Stationary Sources

As a conservative approach, it is assumed that emissions from emergency generators are not associated with the market shifted events because they are accounted for in the Proposed Project's emissions and would occur regardless of how many events are market shifted to the proposed Arena.

Emissions from Backfilled Uses and Events

For the uses that will backfill the current off-site LA Clippers' off-site team offices and practice and athletic training facility, emissions estimates were based on the same methodology used to estimate existing emissions at those locations, where the electricity emission factor was also adjusted for the operational year (i.e., 2024 through 2054).

For the backfilled events at Staples Center, emissions estimates were based on the same methodology used to estimate emissions from the market shifted events, using an event size of 10,500 attendees (conservatively considered as a large event) and number of events, based on the 2019 market analysis by Conventions, Sports and Leisure (CSL) that averaged attendance at Staples Center third-party events over a 3-year period report.[84] In addition, the electricity emission factor was adjusted for the operational year (i.e., 2024 through 2054).

LEED Gold Certification Requirements

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

[84] Conventions, Sports and Leisure (CSL), 2019. *Staples Center Vacated Event Days Analysis*. May 14, 2019.

requirements under the Building Design + Construction (BD+C) category. 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 create healthier indoor environments. LEED certification for the Arena Structure would be sought under LEED BD+C New Construction and Major Renovation, and certification for the other buildings surrounding the proposed plaza would be sought under LEED BD+C Core + Shell. The hotel would be LEED Gold certified under LEED BD+C Hospitality. Measures would be incorporated into the final design of each component to achieve sufficient points for LEED Gold certification. Based on prior experience with sports facilities and other major venues, the design team for the Proposed Project has identified a menu of project features that are within control of the project applicant and that could be feasibly implemented to achieve the necessary points to achieve a LEED Gold certification, consistent with the requirements of AB 987. Based on the project applicant's AB 987 application, the Proposed Project's design features related to LEED certification could include the following:[85]

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 would have 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.

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. The Proposed Project would provide shuttle pick-up and drop-off service at the following Metro rail stations: the existing Metro Green Line – Hawthorne/Lennox Station and the future Metro Crenshaw/LAX Line – Downtown Inglewood Station. In addition, the Project Site is adjacent to two LA Metro bus routes (lines 117 and 212/312 stop at the intersection of West Century Boulevard and South Prairie Avenue) and is also within 0.5 mile of a third Metro bus route (the combined 740/40 line stops at the intersection of West Century Boulevard and La Brea/Hawthorne Boulevard).

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.

[85] Murphy's Bowl LLC, 2018. *AB 987 Application for the Inglewood Basketball and Event Center, Attachment G: Greenhouse Gas Analysis.* November 2018.

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 energy performance and renewable energy production. The Proposed Project would include a 700-kilowatt (kW) photovoltaic (PV) system, generating approximately 1,085,000 kilowatt-hours (kW-hrs) of carbon-free energy annually. The Proposed Project would also implement the following energy efficiency measures: Title 24 compliance; use of 100 percent LED lighting indoors and outdoors throughout the site; and implementation of high efficiency HVAC systems. 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. To achieve this credit, the Proposed Project would recycle at least 75 percent of demolition materials, which would exceed the City'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,[86] green education program, LEED Operations + Management (O+M) Starter Kit (Pest Management and Green Cleaning Program), and the purchasing of 100 percent LED lamps.

Impacts and Mitigation Measures

Impact 3.7-1: Construction and operation of the Proposed Project could generate "net new" GHG emissions, either directly or indirectly, that could have a significant impact on the environment. (Less Than Significant with Mitigation)

As noted above the Proposed Project's baseline emissions are the annual operational GHG emissions produced by existing conditions and activities against which the Proposed Project's

[86] 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.

GHG emissions are compared, which include existing on-site structures that would be removed and replaced with construction of the Proposed Project, as well as the operational emissions associated with events that would be market shifted from existing venues in the Los Angeles region, including the LA Clippers games. Although the existing LA Clippers' team business operations and practice and athletic training facility were considered part of the existing conditions, emissions from these activities were not included in the baseline because it is assumed that these facilities would be utilized for similar uses (i.e., "backfilled") upon being vacated by the LA Clippers.

Existing Emissions

Table 3.7-6 presents total annual GHG emissions by source representing the existing conditions (2018).

TABLE 3.7-6
EXISTING CONDITIONS (2018) - TOTAL ANNUAL GHG EMISSIONS BY SOURCE AND CATEGORY ($MTCO_2E$)

Category	Existing On-site[a]	Existing Off-site[b]	Total Existing
Mobile	835	962	1,797
Electricity	127	293	420
Natural Gas	85	59	144
Water and Wastewater	9	3	12
Solid Waste	62	17	79
Area Sources (Landscaping)	<1	<1	<1
Total[c]	**1,119**	**1,333**	**2,452**

NOTES:
[a] Emissions from existing on-site operations that would be removed.
[b] Emissions from existing off-site operations associated with the LA Clippers' team business operations and the LA Clippers' practice and athletic training facility.
[c] Due to rounding, emissions from individual sectors may not add up to exact total.

SOURCE: ESA, 2019. See Appendix G.

Construction Emissions

Table 3.7-7 presents the total annual GHG emissions from construction of the Proposed Project by calendar year over the duration of the construction schedule.

TABLE 3.7-7
ANNUAL CONSTRUCTION GHG EMISSIONS

Year	CO_2e Emissions (MT/year)
2021 - Offroad Equipment	1,128
2022 - Offroad Equipment	1,968
2023 - Offroad Equipment	889
2024 - Offroad Equipment	488
Construction Mobile -On-road	12,794

Offroad Electric Equipment[b]		711
Construction Office[b]		14
Construction Electricity (Water)[b]		34
Offroad CNG Equipment[b]		52
	Total[c]	**18,078**
Amortized over 30 years[d]		603

NOTES:

[a] Represents the total GHG emissions from on-road mobile sources over the entire construction duration. This category includes workers, vendor and haul trucks.

[b] Represents the total GHG emissions over the entire construction duration.

[c] Due to rounding, emissions from individual years may not add up to total.

[d] Construction emissions amortized over a period of 30 years per SCAQMD guidance.

SOURCE: ESA, 2019. See Appendix G.

Operational Emissions

Operational emissions associated with the Proposed Project would include emissions from energy use (electricity and natural gas), on-road motor vehicles (mobile), off-road motor vehicles, solid waste, water and wastewater, area sources (landscaping), and on-site stationary sources (emergency generators). Emissions reductions would result from the IBEC Transportation Demand Management (TDM) Plan and the physical design features incorporated in the Project that stem from LEED Gold certification and Title 24 compliance. As discussed above under Methodology, the operational emissions associated with the Proposed Project were calculated using methods consistent with the CalEEMod model.

Section 3.14, Transportation and Circulation, presents estimates that the Proposed Project would result in approximately 30,553,129 million net new total annual VMT after accounting for use of alternative modes of transportation, internal trip capture, and transportation demand management features of the Proposed Project.

Table 3.7-8 presents total annual GHG emissions by source for the first full year of operations (2025). Pursuant to SCAQMD guidance, construction emissions were amortized over a period of 30 years and then added to annual operational emissions. As indicated in Table 3.7-8, the Proposed Project's first full year of operational GHG emissions at full buildout, including amortized construction emissions, would be approximately 23,379 $MTCO_2e$ per year.

TABLE 3.7-8
ANNUAL OPERATIONAL GHG EMISSIONS
AT FIRST FULL YEAR OF OPERATIONS (2025)

Category	CO_2e Emissions (MT/year)
Mobile	18,233
Electricity	2,811
Natural Gas	1,270
Water and Wastewater	55

Solid Waste		432
Area Sources (Landscaping)		<1
Emergency Generators		71
Cooling Tower		11
Media Van Generators		24
Electric Offroad Equipment		8
Delivery Trucks (TRU Exhaust and Idling)		13
Construction Emissions [a]		603
	Total [b]	**23,530**

NOTES:
[a] Construction emissions amortized over a period of 30 years per SCAQMD guidance.
[b] Due to rounding, emissions from individual sectors may not exactly add up to total.
SOURCE: ESA, Appendix G.

Net New Emissions

Table 3.7-9 presents annual net new annual GHG emissions by source over the 30-year lifetime of the Proposed Project (2024 through 2054). The baseline for determining net new emissions includes existing emissions (as summarized in Table 3.7-6), as well as events that would be "market-shifted" to the proposed Arena. As summarized in Table 3.7-4, market-shift events would include 47 annual LA Clippers games that currently occur at Staples Center and 89 annual non-NBA events that currently occur at other existing venues in the Los Angeles region. As indicated in Table 3.7-9, the Proposed Project net new GHG emissions for the first full year of operation in 2025 would be approximately 14,439 $MTCO_2e$ per year. By the year 2054, annual net new emissions would be reduced to approximately 9,926 $MTCO_2e$ per year, due to anticipated improvements in vehicle fuel efficiency and lower GHG intensity of the electricity supply.

TABLE 3.7-9
PROPOSED PROJECT TOTAL NET NEW GHG EMISSIONS (MT CO2E/YEAR)

Year	Operational [a]	Existing [b]	Backfilled [c]	Market Shifted [d]	"Net New" [e]
2024[f]	12,149	(1,050)	806	(4,457)	7,448
2025	23,530	(2,038)	1,560	(8,613)	14,439
2026	22,840	(1,982)	1,513	(8,344)	14,027
2027	22,206	(1,929)	1,470	(8,100)	13,646
2028	21,623	(1,880)	1,429	(7,879)	13,293
2029	21,061	(1,834)	1,390	(7,661)	12,956
2030	20,596	(1,791)	1,356	(7,495)	12,665
2031	20,145	(1,752)	1,323	(7,329)	12,387
2032	19,728	(1,714)	1,292	(7,178)	12,128
2033	19,345	(1,680)	1,263	(7,041)	11,887
2034	18,990	(1,647)	1,236	(6,915)	11,663
2035	18,663	(1,616)	1,210	(6,802)	11,455
2036	18,362	(1,588)	1,187	(6,698)	11,263
2037	18,084	(1,562)	1,165	(6,604)	11,083

Year	Operational [a]	Existing [b]	Backfilled [c]	Market Shifted [d]	"Net New" [e]
2038	17,826	(1,537)	1,144	(6,518)	10,915
2039	17,586	(1,513)	1,124	(6,439)	10,757
2040	17,361	(1,491)	1,105	(6,367)	10,608
2041	17,150	(1,470)	1,087	(6,301)	10,467
2042	16,952	(1,450)	1,070	(6,239)	10,333
2043	16,763	(1,430)	1,054	(6,181)	10,205
2044	16,583	(1,412)	1,038	(6,127)	10,082
2045	16,408	(1,394)	1,022	(6,075)	9,962
2046	16,384	(1,393)	1,021	(6,063)	9,950
2047	16,364	(1,392)	1,020	(6,052)	9,940
2048	16,348	(1,392)	1,019	(6,044)	9,932
2049	16,336	(1,392)	1,019	(6,036)	9,927
2050	16,331	(1,393)	1,019	(6,031)	9,926
2051	16,331	(1,393)	1,019	(6,031)	9,926
2052	16,331	(1,393)	1,019	(6,031)	9,926
2053	16,331	(1,393)	1,019	(6,031)	9,926
2054	16,331	(1,393)	1,019	(6,031)	9,926
Total over 30 year life of Proposed Project	561,036	(48,292)	36,018	(205,712)	343,050

NOTES:

[a] Includes construction emissions amortized over 30 years. For details, see Appendix G. Annual operational emissions account for the anticipated change over time in CO2e intensity factors for electricity (due to the RPS) and mobile sources (due to state regulations for vehicle efficiency).

b Existing emissions from Table 3.7-6. Includes emissions from existing on-site structures that would be removed and replaced with construction of the Proposed Project, as well as the existing off-site uses such as the LA Clippers' team business operations, and the existing LA Clippers' practice and athletic training facility. Annual existing emissions account for the anticipated change over time in CO2e intensity factors for electricity (due to the RPS) and mobile sources (due to state regulations for vehicle efficiency).

c Includes the backfilled LA Clippers' team business offices, the backfilled LA Clippers' practice and athletic training facility and backfilled Staples Center events.

d Includes existing operational emissions from the LA Clippers games at the Staples Center, See Appendix G.

e Net new emissions subtracts existing emissions and market shift emissions from operational emissions, but retains backfilled emissions in the baseline.

f Represents emissions from 6 months of operation.

SOURCE: ESA, 2019.

Based on the analysis presented above, over the 30-year operational life of the Proposed Project, a net increase of 343,050 MTCO2e of GHG would be generated. Between now and the year 2054, there is considerable uncertainty about changes in the regulatory or technological environment that could affect the actual total GHG emissions of the Proposed Project. Nevertheless, based on the analysis presented above, this impact is considered **significant**.

Mitigation Measure 3.7-1

To Be Determined

Level of Significance After Mitigation: To Be Determined

Impact 3.7-2: Construction and operation of the Proposed Project could be inconsistent with applicable plans, policies and regulations adopted for the purpose of reducing the emissions of GHGs. (Less Than Significant).

CARB 2017 Scoping Plan Update

As directed by Executive Order B-30-15, CARB's 2017 Scoping Plan Update describes how the State plans to achieve the 2030 GHG emission reduction goal for California of 40 percent below 1990 levels by 2030, as mandated by SB 32. The 2017 Scoping Plan Update strategy for meeting the 2030 GHG target incorporates the full range of legislative actions and State-developed plans that have relevance to the year 2030, including the LCFS, SB 350, the 2016 Mobile Source Strategy, the Sustainable Freight Action Plan, SB 1383, and the Cap-and-Trade Program (AB 398).

The Proposed Project would be consistent with key state plans and regulatory requirements referenced in the 2017 Scoping Plan Update designed to reduce statewide emissions. According to the 2017 Scoping Plan Update, reductions needed to achieve the 2030 target are expected to be achieved by increasing the RPS to 50 percent of the State's electricity by 2030, greatly increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting high speed rail and other alternative transportation options, and increasing the use of high efficiency appliances, water heaters, and HVAC systems. The Proposed Project would not impede implementation of these potential reduction strategies identified by CARB, and it would benefit from statewide and utility-provider efforts towards increasing the portion of electricity provided from renewable resources.[87] The Proposed Project would also benefit from statewide efforts towards increasing the fuel economy standards of vehicles and reducing the carbon content of fuels. The Proposed Project would utilize energy efficient appliances and equipment, as required by Title 24, and it would provide EV charging stations to support the future use of electric and hybrid-electric vehicles by employees and visitors.

For these reasons described above, the Proposed Project post-2020 emissions trajectory would decline over time, consistent with the 2017 Scoping Plan Update.

SCAG 2016 RTP/SCS

As discussed in Section 3.2, Air Quality, the 2016 RTP/SCS is designed to support development of compact communities in existing urban areas, with more mixed-use and infill development, and reuse of developed land that is also served by high quality transit. The 2016 RTP/SCS describes how the region can attain the GHG emission-reduction targets set by CARB by reducing VMT to achieve an 8 percent reduction in passenger vehicle GHG emissions by 2020,

[87] As discussed previously, with the passage of SB 100, California's RPS has been increased over what is prescribed by the 2017 Scoping Plan Update, requiring retail sellers and local publicly-owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and requires that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

18 percent reduction by 2035, and 21 percent reduction by 2040 compared to the 2005 level on a per capita basis.

The 2016 RTP/SCS includes strategies for transportation and land use that are designed to reduce VMT and the GHG emissions associated with on-road vehicle travel. This includes but is not limited to strategies that increase the density and mix of land uses; focus growth around transit; provide transit improvements; expand active transportation networks; expand regional charging infrastructure for electric vehicles, and expand TDM programs.

As discussed in Section 3.10, Land Use and Planning, the 2016 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in infill areas well served by transit. The TDM strategies in the 2016 RTP/SCS are focused on reducing peak period and SOV travel by encouraging behavior shifts to carpooling or vanpooling or reducing peak period travel. SCAG encourages employers to offer telecommuting or alternative work week schedules to help reduce peak period travel.

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.[88]

Goal 6 of the 2016 RTP/SCS aims to improve air quality and encourage active transportation. The Proposed Project would be consistent with Goal 6 through the implementation of a comprehensive TDM Program provides transportation services, monetary incentives and project design features that encourage and support the use by employees, event attendees and customers of alternative modes of transportation and the reduction of vehicle trips, including by increasing average vehicle occupancy. The program is designed to be consistent with the requirements and achieve the reduction in vehicle trips set forth in AB 987 and would be required under Mitigation Measure 3.14-2(b). The Proposed Project TDM Program would include the following components: encourage alternative modes of transportation (rail, public bus, and vanpool); provide event-day dedicated shuttle services; encourage carpools and zero-emission vehicles; encourage active transportation; implement an employee vanpool program and a park-n-ride program; provide alternative transportation information services; reduce on-site parking demand; and provide event-day local microtransit service.

The TDM program is designed to achieve and maintain a 15 percent reduction in the number of vehicle trips, on an annual basis, by attendees, employees, visitors, and customers as compared to trips generated by Project operations absent the TDM program. Pursuant to SB 987, the measures included in the Proposed Project TDM program must be implemented so that a 7.5 percent reduction in vehicle trips is achieved and maintained by the end of the first NBA season during which an NBA team has played at the Arena, anticipated to occur by June 2025. A 15 percent reduction in vehicle trips must be achieved no later than January 1, 2030. This requirement

[88] California Air Resources Board, 2016. *Southern California Association of Governments' (SCAG) 2016 Sustainable Communities Strategy (SCS) ARB Acceptance of GHG Quantification Determination.* June 2016.

directly supports SCAG's 2035 target of reducing per-capita VMT 18 percent reduction by 2035.The reduction in trips achieved under the Proposed Project TDM program would reduce GHG emissions from Project-related transportation.

In addition, as described above, the TDM Program would encourage active transportation (through TDM-4) and alternative modes of travel (e.g., through TDM-1, TDM-5, and TDM-8). For example, the Proposed Project would include 23 spectators and 60 employee on-site bicycle parking spaces, which would exceed the bicycle parking requirements established in Chapter 12, Article 19, Section 12-42.1, of the Municipal Code. To promote pedestrian travel, the Proposed Project would include improvements to the sidewalks fronting the Project Site and a pedestrian bridge crossing South Prairie Avenue to promote a safe pedestrian circulation system and would provide high-capacity pedestrian pathways. In addition, 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. This would further support Goal 6 of the RTP/SCS.

Goal 7 of the 2016 RTP/SCS aims to actively encourage and create incentives for energy efficiency. As discussed above under *Project Design Features*, the Proposed Project would utilize energy efficiency appliances and equipment, as required by Title 24, and it would provide EV charging stations to support the future use of electric and hybrid-electric vehicles by employees and visitors traveling to and from the Project Site. In addition, the Proposed Project would be designed and constructed to meet LEED Gold certification requirements, which would require the incorporation of energy efficiency measures. The Proposed Project would comply with Title 24 energy efficiency requirements, use of 100 percent LED lighting indoors and outdoors throughout the site, and install high efficiency HVAC systems. In addition, the Proposed Project's design would include compliance with CALGreen Code Voluntary Tier 1, which, based on the preliminary design of the Proposed Project, is estimated to achieve a 10 percent reduction in energy consumption over Title 24 2019 standards. These actions would be consistent with Goal 7 of the 2016 RTP/SCS.

For the reasons described above, the Proposed Project would be consistent with the 2106 RTP/SCS, and would not be inconsistent with its policies that were adopted for the purposes of avoiding or mitigating environmental effects.

Executive Order S-3-05

Executive Order No. S-3-05 established a long-term goal of reducing California's GHG emissions to 80 percent below the 1990 level by the year 2050. The Proposed Project GHG emissions would decline from its first operational year in 2024 through at least 2050 due to continued regulatory and technological advancements. The extent to which GHG emissions from mobile sources indirectly attributed to the Proposed Project would change in the future depends on the quantity (e.g., number of vehicles, average daily mileage) and quality (i.e., carbon content)

of fuel that would be available and required to meet both regulatory standards, and resident and worker needs.

Renewable power requirements, the LCFS, and vehicle emissions standards discussed above will all decrease GHG emissions per unit of energy delivered or per VMT. Due to the uncertainty of technological advancements that could be anticipated over the next 30 years and the unknown parameters of the regulatory framework in 2050, further quantitative analysis of the Proposed Project impacts relative to the 2050 target would be speculative. Section 15145 of the CEQA Guidelines directs that "[i]f, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

Even though the State has not provided a clear regulatory and technological roadmap to achieve the 2050 goal, it has demonstrated the potential pace at which emission reductions can be achieved through new regulations, technology deployments, and market developments. In developing the 2017 Scoping Plan Update, CARB, CEC, CPUC, and the California Independent System Operator (CAISO) commissioned a study to evaluate the feasibility and cost of meeting the 2030 target along the way to reaching the State goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, the California State Agencies' PATHWAYS Project explores scenarios for meeting the State long term GHG emissions targets, encompassing the entirety of California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.[89] While acknowledging the inherent uncertainty associated with its modeling assumptions, the PATHWAYS study emphasizes the need for significant action and continued policy development by the State to support low-carbon technologies and markets for energy efficiency, building electrification, renewable electricity, zero emission vehicles, and renewable liquid fuels. The study underscores the need for a periodic review of State policies and programs for reducing GHG emissions, as was anticipated by AB 32 in its directive to update the Scoping Plan at least every five years.

A 2018 update to the PATHWAYS study advanced the understanding of what is required for technology deployment and other GHG mitigation strategies if California is to meet its long-term climate goals. The 2018 study concludes that to achieve high levels of consumer adoption of zero-carbon technologies, particularly of electric vehicles and energy efficiency and electric heat in buildings, market transformation is needed to reduce the capital cost and to increase the range of options available. This market transformation can be facilitated by (1) higher carbon prices (which can be created by the Cap and Trade and LCFS programs); (2) codes and standards, regulations and direct incentives, to reduce the upfront cost to the customer; and (3) business and

[89] Energy + Environmental Economics (E3), 2015. *Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios*. Available: [HYPERLINK "https://www.ethree.com/public_proceedings/summary-california-state-agencies-pathways-project-long-term-greenhouse-gas-reduction-scenarios/"]. Accessed March 19, 2019 and April 4, 2015.

policy innovations to make zero-carbon technology options the cheaper, preferred solutions compared to fossil fueled alternatives.[90]

Statewide efforts are underway to facilitate the achievement of the EO S-3-05 goals. It is reasonable to expect the Proposed Project GHG emissions to decline over time, as shown in Table 3.7-9, as the regulatory initiatives identified by CARB in the 2017 Scoping Plan Update are implemented, and other technological innovations occur. Given the reasonably anticipated decline in Proposed Project emissions, the Proposed Project would not conflict with or frustrate the ability of the State to achieve the 2050 horizon-year goal of EO S-3-05.

Mobile Source Strategy and Executive Order B-48-18

State goals for ZEVs are expressed in the Advanced Clean Cars Initiative (ACC) and the ZEV mandate established by Governor's Executive Order B-16-1, which sets a target of reaching 1.5 million ZEVs (meaning battery electric vehicles and fuel cell electric vehicles) and plug-in hybrid electric vehicles on California's roadways by 2025.

According to EMFAC2017, which incorporates the State ZEV mandate, there will be approximately 31,700,000 passenger cars and light trucks on the road in California by 2030, at which time 1.5 million ZEVs would constitute approximately 4.7 percent of all vehicles.[91] The more aggressive Mobile Source Strategy, included in the 2017 Scoping Plan Update as a component of the overall strategy for achieving the 2030 GHG target, calls for 4.2 million ZEVs on the road by 2030, equivalent to about 13.2 percent of passenger vehicles + light duty trucks (LDTs).

The Proposed Project would be consistent with the State ZEV mandate by providing a minimum of 8 percent of on-site parking spaces with EV charging capability.

City of Inglewood ECAP

As shown in Table 4.7-2, total reductions from ECAP implementation are expected to reduce emissions by 18.8 percent below 2005 levels by 2020, enabling the City to meet its 2005 target. However, the City would need to reduce emissions by an additional 111,702 MTCO2e per year by 2035 to meet its 2035 emissions reduction goal.

The ECAP includes the following strategies and actions that are applicable to the Proposed Project:

---

90 Energy + Environmental Economics (E3), 2018. *Deep Decarbonization in a High Renewables Future. Updated Results from the California PATHWAYS Model*. Available: [HYPERLINK "https://www.ethree.com/wp-content/uploads/2018/06/Deep_Decarbonization_in_a_High_Renewables_Future_CEC-500-2018-012-1.pdf"]. Accessed March 18, 2019. June 2018.

91 EMFAC2017 estimates the future percentage of the state's ZEVs based on compliance with the State's ZEV mandate. EMFAC2017's forecasted ZEV population for 2030 is approximately 3.6 percent of all passenger and light duty vehicles, but the 3.6 percent figure represents the equivalent percentage of all vehicles operating as a pure zero emission vehicle (e.g., 100 percent battery electric), whereas the actual population would include PHEVs that operate partially on fossil fuels.

Strategy 2: Increase Energy Efficiency. Specific actions under this strategy include making commercial buildings more efficient and increasing the energy efficiency of street and traffic lights. The Proposed Project would be designed and constructed to meet LEED Gold certification requirements, which would require the incorporation of energy efficiency measures. Although the specific LEED credits and project features that will allow the Proposed Project to be certified as LEED Gold are currently uncertain, achieving LEED Gold certification would likely require extensive energy efficiency measures including, but not limited to, the use of 100 percent LED lighting indoors and outdoors throughout the Proposed Project; and implementation of high efficiency HVAC systems, as outlined under Project Design Features in Section 3.7.4.

Strategy 3: Support Renewable Energy Generation. This strategy is focused on City actions that promote more renewal energy generation in the community, like permit streamlining and support for funding and financing programs that help make renewable energy affordable. The Proposed Project design is in the conceptual stage, so the specific LEED credits and project features that would be selected to achieve LEED Gold certification are uncertain, but receiving LEED Gold certification would likely include some amount of on-site solar PV generation, as outlined under Project Design Features in Section 3.7.4.

Strategy 4: Improve Transportation Options and Manage Transportation Demand. Specific actions under this strategy include improving the safety and efficiency of existing roadways, improving transit systems, improving bicycle facilities, making parking more efficient, reducing commute trips, and encourage land use intensification and diversity. The Proposed Project TDM Program would be consistent with these goals by encouraging use of transit, active transportation and alternatives to single-occupant vehicle travel.

Strategy 5: Reduce Consumption and Waste. Specific actions under this strategy include using less water, producing less waste, and promote local food production. The Proposed Project design is in the conceptual stage, so the specific LEED credits and project features that would be selected to achieve LEED Gold certification are uncertain, but achieving LEED Gold certification is likely to include credits under the Water Efficiency and Materials and Resources categories. As outlined under Project Design Features in Section 3.7.4, the Proposed Project would likely include use of recycled water for landscaping, ultra-low flow fixtures in restrooms such as low flow faucets with aerators, dual flush toilets, and waterless urinals, and recycling of at least 75 percent of demolition materials. Achievement of this amount of waste reduction and diversion would exceed the City of Inglewood target of 50 percent demolition waste recycling and would be in accordance with State goals to divert a minimum of 75 percent of construction and demolition materials from landfill disposal.

Based on the concept designs available at this time and the Proposed project's commitment to achieve LEED Gold Certification in part with planned energy efficiency strategies discussed above, the Proposed Project would be consistent with the City's ECAP.

Conclusion

For the reasons described above, the Proposed Project would not be inconsistent with applicable plans, policies and regulations adopted for the purpose of reducing the emissions of GHGs, including the CARB 2017 Scoping Plan Update, SCAG 2016 RTP/SCS, Executive Order S-3-05, Mobile Source Strategy and Executive Order B-48-18, and the City of Inglewood ECAP. Therefore, the impact is considered **less than significant**.

Mitigation Measures

None required.

Although no mitigation measures are required to achieve consistency of the Proposed Project with applicable plans, policies, and regulations adopted for the purpose of reducing emissions of GHGs, implementation of Mitigation Measure 3.14-2(b) would require the implementation of a comprehensive TDM program that would reduce vehicular trip making and associated GHG emissions, and Mitigation Measures 3.7-1(a) and 3.7-1(b) would require incorporation of physical design features, on-site GHG reduction measures, and any necessary off-site GHG reduction measures, and would result in no net new Proposed Project GHG emissions. The implementation of these measures would further ensure consistency of the Proposed Project with State, regional, and local GHG reduction plans.

This page intentionally left blank