



## 5.10 Greenhouse Gas Emissions

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## 5.10 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the Project and analyzes Project compliance with applicable regulations. Consideration of the Project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is also analyzed.

This section is based upon the following technical studies included as [Appendix 11.9, \*Air Quality/Greenhouse Gas Analysis\*](#), and [Appendix 11.8, \*Traffic Impact Analysis\*](#), respectively:

- iLanco Environmental, LLC, *Air Quality and Greenhouse Gas Analysis, In Support of: California Grand Village Azusa Greens*, October 2017 (as amended August 15, 2018) (Air Quality and Greenhouse Gas Analysis); and
- Linscott Law & Greenspan, *California Grand Villages at Azusa Greens*, February 6, 2018 (as amended August 9, 2018) (Traffic Impact Analysis).

### 5.10.1 EXISTING SETTING

The Site lies within the southern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of air pollution in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

### SCOPE OF ANALYSIS FOR CLIMATE CHANGE

The study area for climate change and the analysis of GHG emissions is broad as climate change is influenced by world-wide emissions and their global effects. However, the study area is also limited by CEQA Guidelines [Section 15064(d)], which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact, which may be caused by the project.

The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from human activities that have grown more than 70 percent between 1970 and 2004. The State of California is leading the nation in managing GHG emissions. Accordingly, the impact analysis for this Project relies on guidelines, analyses, policy, and plans for reducing GHG emissions established by the California Air Resources Board (CARB).



## GLOBAL CLIMATE CHANGE – GREENHOUSE GASES

The natural process through which heat is retained in the troposphere is called the “greenhouse effect.”<sup>1</sup> The greenhouse effect traps heat in the troposphere through a three-fold process as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHG in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This “trapping” of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO<sub>2</sub>). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs normally associated with the Project include the following:<sup>2</sup>

- Water Vapor (H<sub>2</sub>O). Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, it does not contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.
- Carbon Dioxide (CO<sub>2</sub>). Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO<sub>2</sub> emissions from fossil fuel combustion increased by a total of 5.6 percent between 1990 and 2015.<sup>3</sup> Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining GWPs for other GHGs.
- Methane (CH<sub>4</sub>). Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The United States’ top three methane sources are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, used for space and water heating, steam production, and power generation. The GWP of methane is 25.
- Nitrous Oxide (N<sub>2</sub>O). Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 298.

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<sup>1</sup> The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers.

<sup>2</sup> All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change.

<sup>3</sup> U.S. Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2016*, April 2018, [https://www.epa.gov/sites/production/files/2018-01/documents/2018\\_complete\\_report.pdf](https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf), accessed August 22, 2018.



- Hydrofluorocarbons (HFCs). HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year GWP of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.<sup>4</sup>
- Perfluorocarbons (PFCs). PFCs are compounds consisting of carbon and fluorine, and are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of CO<sub>2</sub>, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).<sup>5</sup> The GWP of PFCs range from 7,390 to 12,200.<sup>6</sup>
- Sulfur hexafluoride (SF<sub>6</sub>). SF<sub>6</sub> is a colorless, odorless, nontoxic, nonflammable gas. SF<sub>6</sub> is the most potent GHG that has been evaluated by the IPCC with a GWP of 22,800.<sup>7</sup> However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to CO<sub>2</sub> (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).<sup>8</sup>

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O<sub>3</sub>) depleters; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- Hydrochlorofluorocarbons (HCFCs). HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year GWPs of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.<sup>9</sup>
- 1,1,1 trichloroethane. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 146 times that of CO<sub>2</sub>.<sup>10</sup>
- Chlorofluorocarbons (CFCs). CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency's (EPA) Final Rule (57 Federal Register [FR] 3374) for the phase out of O<sub>3</sub> depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the

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<sup>4</sup> Ibid.

<sup>5</sup> U.S. Environmental Protection Agency, *Overview of Greenhouse Gas Emissions*, <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>, accessed August 22, 2018.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Intergovernmental Panel on Climate Change, *Climate Change 2015 Synthesis Report*, [https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf), accessed August 22, 2018.

<sup>10</sup> Ibid.



atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with 100-year GWPs ranging from 3,800 for CFC 11 to 14,400 for CFC 13.<sup>11</sup>

## 5.10.2 REGULATORY SETTING

### FEDERAL LEVEL

To date, no national standards have been established for the nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the Federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO<sub>2</sub>], methane [CH<sub>4</sub>], nitrous oxide [N<sub>2</sub>O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF<sub>6</sub>]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the

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<sup>11</sup> Ibid.



EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated Federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO<sub>2</sub> in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021, and NHTSA intends to set standards for model years 2022 through 2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022 through 2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO<sub>2</sub> emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO<sub>2</sub> emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO<sub>2</sub> emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO<sub>2</sub> emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.



Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all Federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

## **STATE LEVEL**

Various statewide and local initiatives to reduce the State's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation is necessary to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

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

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary also submits biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team, made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of the State's first climate adaptation strategy. This strategy results in consistent guidance from experts on how to address climate change impacts in the State of California.



Executive Order S-14-08. Executive Order S-14-08 expands the State’s Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the “Renewable Electricity Standard” on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative (signed into law on December 14, 2004) establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California’s Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), detailed below, which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) that advanced the 20 percent deadline to 2010, a goal that was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.”

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016.

When fully phased in, the near-term standards result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards result in a reduction of about 30 percent.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.



Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council under the California Workforce Investment Board. The Green Collar Jobs Council develops a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in *CEQA Guidelines* Section 15064.7 that encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the *CEQA Guidelines* Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the *CEQA Guidelines* Amendments and filed them with the Secretary of State for inclusion in the CCR. The *CEQA Guidelines* Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets are updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

Senate Bills 1078 and 107. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that



all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

Senate Bill 32 (SB 32). Signed into law on September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

Senate Bill 100 (SB 100). SB 100 (Chapter 312, Statutes of 2018) requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours(kWh) of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, 60 percent by December 31, 2030, and 100 percent by December 31, 2045. The bill would require the CPUC, CEC, state board, and all other state agencies to incorporate that policy into all relevant planning. In addition, SB 100 would require the PUC, Energy Commission, and state board to utilize programs authorized under existing statutes to achieve that policy and, as part of a public process, issue a joint report to the Legislature by January 1, 2021, and every 4 years thereafter, that includes specified information relating to the implementation of the policy.

## **CARB Scoping Plan**

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve the California GHG reductions required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California would implement to reduce the projected 2020 "Business as Usual" (BAU) emissions to 1990 levels, as required by AB 32. These strategies are intended to reduce CO<sub>2</sub>eq<sup>12</sup> emissions by 174 million metric tons (MT). This reduction of 42 million MT CO<sub>2</sub>eq, or almost ten percent from 2002 to 2004 average emissions, would be required despite the population and economic growth forecasted through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as those expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. When CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan

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<sup>12</sup> Carbon Dioxide Equivalent (CO<sub>2</sub>eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.



update also looks beyond 2020 toward the 2050 goal, established in Executive Order S-3-05, and observes that “a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal.” The Scoping Plan update did not establish or propose any specific post-2020 goals, but identified such goals in water, waste, natural resources, clean energy, transportation, and land use.

On January 20, 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State’s post-2020 reduction strategy. The Second Update was approved on December 14, 2017 and reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.<sup>13</sup> The 2017 Scoping Plan establishes a new emissions limit of 260 million MTCO<sub>2</sub>eq for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030. The 2017 Scoping Plan Update contains the following goals:

1. SB 350
  - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
  - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
  - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
  - Maintaining existing GHG standards for light- and heavy-duty vehicles.
  - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
  - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
  - Improve freight system efficiency.
  - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
  - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant (SLCP) Reduction Strategy
  - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
  - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
  - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
  - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
  - CARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements.

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<sup>13</sup> California Air Resources Board, California’s 2017 Climate Change Scoping Plan, November 2017, [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf), accessed August 22, 2018.



8. 20 percent reduction in GHG emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

### **5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA**

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance.

Lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change (CEQA Guidelines Section 15064.7[c]). CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, the City has not yet established specific quantitative significance thresholds for GHG emissions for development projects.

On December 5, 2008, the SCAQMD adopted GHG significance thresholds for Stationary Sources, Rules, and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. A proposed project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from Senate Bill (SB) 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For industrial stationary source projects, the SCAQMD adopted a screening threshold of 10,000 MTCO<sub>2</sub>eq per year (MTCO<sub>2</sub>eq/year). This threshold was selected to capture 90 percent of the GHG emissions from these types of projects where the combustion of natural gas is the primary source of GHG emissions. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 MTCO<sub>2</sub>eq/year. SCAQMD concluded that projects with emissions less than the screening thresholds would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual (BAU) emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third Option. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 MTCO<sub>2</sub>eq per service population (SP) per year or 3.0 MTCO<sub>2</sub>eq per SP for post-2020 projects.<sup>14</sup> Tier 5 would exclude projects that implement offsite mitigation

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<sup>14</sup> The project-level efficiency-based threshold of 4.8 MTCO<sub>2</sub>eq per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 MTCO<sub>2</sub>eq per SP per year and an efficiency threshold at the project level of 3.0 MTCO<sub>2</sub>eq/year.



(GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a “service population” basis (the sum of the number of jobs and the number of residents provided by a project) such that a project would allow for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed-use).

While not adopted by the SCAQMD Board, the guidance document prepared for the stationary source threshold also suggested the same tiered approach for residential and commercial projects with a 3,000 MTCO<sub>2</sub>eq/year screening threshold. However, at the time of adoption of the industrial stationary source threshold, the SCAQMD felt additional analysis was required along with coordination with CARB’s GHG significance threshold development efforts.

At the November 2009 meeting of the SCAQMD GHG working group, SCAQMD staff presented two options for screening thresholds for residential and commercial projects. The first option would have different thresholds for specific land uses. The proposed threshold for residential projects is 3,500 MTCO<sub>2</sub>eq/year, the commercial threshold is 1,400 MTCO<sub>2</sub>eq/year, and the mixed-use threshold is 3,000 MTCO<sub>2</sub>eq/year. The second option would apply the 3,000 MTCO<sub>2</sub>eq/year screening threshold for all commercial/residential projects. Lead agencies would be able to select either option. These thresholds are based on capturing 90 percent of the emissions from projects and requiring them to comply with the higher tiers of the threshold (i.e., performance requirements or GHG reductions outside of the project) to not result in a significant impact. As the Project involves the development of a Senior Living Facility and the reconfiguration of the existing golf course, the mixed-use threshold of 3,000 MTCO<sub>2</sub>eq/year was adopted for this analysis.

## **CEQA SIGNIFICANCE CRITERIA**

The issues presented in the Initial Study Environmental Checklist (CEQA Guidelines Appendix G) have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and/or
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

Based on these significance thresholds and criteria, the Project’s effects have been categorized as either “no impact,” a “less than significant impact,” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.



## 5.10.4 IMPACTS AND MITIGATION MEASURES

### GREENHOUSE GAS EMISSIONS

**GHG-1** Would greenhouse gas emissions generated by the Project have a significant impact on global climate change?

**Impact Analysis:** The proposed Project would involve two components: 1) development of the California Grand Village Specific Plan and 2) reconfiguration of the existing golf course. Project-related GHG emissions would include emissions from direct and indirect sources. The Project would result in direct and indirect emissions of CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub>, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct Project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Operational GHG estimations are based on energy emissions from natural gas usage and automobile emissions (passenger cars and trucks). CalEEMod relies upon trip data within the Project's Traffic Impact Analysis (refer to [Appendix 11.8, \*Traffic Impact Analysis\*](#)) and Project-specific land use data to calculate emissions. [Table 5.10-1, \*Projected Annual Greenhouse Gas Emissions\*](#), presents the estimated CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions of the Project. CalEEMod outputs are contained within [Appendix 11.9](#).

#### DIRECT PROJECT-RELATED SOURCES OF GREENHOUSE GASES

Construction Emissions. Construction GHG emissions are typically summed and amortized over the lifetime of a project (assumed to be 30 years), then added to the operational emissions. As shown in [Table 5.10-1](#), the Project would result in 42.6 metric tons carbon dioxide equivalent per year (MTCO<sub>2</sub>eq/year) (amortized over 30 years), which represents a total of 1,278 MTCO<sub>2</sub>eq from construction activities (42.6 MTCO<sub>2</sub>eq/year multiplied by 30 years).

Area Source. Area source emissions were calculated using CalEEMod and Project-specific land use data. Project-related area sources include landscape maintenance equipment, such as lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Site. As noted in [Table 5.10-1](#), the Project would result in 57.0 MTCO<sub>2</sub>eq/year of area source GHG emissions.

Mobile Source. The CalEEMod model relies upon trip data within the Traffic Impact Analysis and Project-specific land use data to calculate mobile source emissions. The Project-related operational emissions are derived predominantly from mobile sources. Based on the Project-generated daily vehicle trips, the Project would result in approximately 992.8 MTCO<sub>2</sub>eq/year of mobile source-generated GHG emissions; refer to [Table 5.10-1](#).



**Table 5.10-1**  
**Projected Annual Greenhouse Gas Emissions**

Emission Source	Emissions (MTCO <sub>2</sub> eq per year) <sup>1</sup>			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total MTCO <sub>2</sub> eq
<b>Direct Emissions</b>				
Construction (amortized over 30 years)	42.4	0.2	0.0	42.6
Area Source	56.6	0.1	0.3	57.0
Mobile Source	991.5	1.3	0.0	992.8
<i>Total Direct Emissions<sup>2</sup></i>	<b>1,090.5</b>	<b>1.6</b>	<b>0.3</b>	<b>1,092.4</b>
<b>Indirect Emissions</b>				
Energy	1,155.7	0.8	3.1	1,159.6
Solid Waste	29.7	43.8	0	73.5
Water Demand	1,426.3	13.8	4.2	259.0
<i>Total Indirect Emissions<sup>2</sup></i>	<b>1,426.32</b>	<b>58.4</b>	<b>7.3</b>	<b>1,492.0</b>
<b>Total Project-Related Emissions</b>	<b>2,584 MTCO<sub>2</sub>eq/year</b>			
<b>Threshold of Significance</b>	<b>3,000 MTCO<sub>2</sub>eq/year</b>			
<b>Project Exceed Thresholds?</b>	<b>No</b>			
Notes:				
1. Emissions were calculated using CalEEMod Version 2016.3.2, as recommended by SCAQMD.				
2. Emissions may be slightly off due to rounding.				
Source: iLanco Environmental, LLC, <i>Air Quality and Greenhouse Gas Analysis, In Support of: California Grand Village Azusa Greens</i> , October 2017; refer to <a href="#">Appendix 11.9</a> .				

## INDIRECT PROJECT-RELATED SOURCES OF GREENHOUSE GASES

Energy Consumption. Energy consumption emissions were calculated using the CalEEMod model and Project-specific land use data. Electricity would be provided to the Site via Southern California Edison (SCE). The Project would indirectly result in 1,159.6 MTCO<sub>2</sub>eq/year due to energy consumption; refer to [Table 5.10-1](#).

Solid Waste. Solid waste associated with operations of the Project would result in 73.5 MTCO<sub>2</sub>eq/year; refer to [Table 5.10-1](#).

Water Demand. Emissions from indirect energy impacts due to water demand would result in 259.0 MTCO<sub>2</sub>eq/year; refer to [Table 5.10-1](#).

## CONCLUSION

Total Project-Related GHG Emissions. As shown in [Table 5.10-1](#), the Project total amount of GHG emissions from direct and indirect sources combined would total 2,584 MTCO<sub>2</sub>eq/year. As such, the Project would not exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO<sub>2</sub>eq. Thus, the Project would have a less than significant impact in this regard.

**Standard Conditions of Approval:** No standard conditions of approval are applicable.

**Mitigation Measures:** No Mitigation Measures are required.

**Level of Significance:** Less Than Significant Impact.



## CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

GHG-2 Would implementation of the Project conflict with an applicable greenhouse gas reduction plan, policy, or regulation?

### Impact Analysis:

#### SCOPING PLAN CONSISTENCY

CARB's Scoping Plan identifies strategies to reduce California's GHG emissions in support of AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Project, such as energy efficiency. While some measures are not directly applicable, the Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories by the CARB as follows:

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. California Light-Duty Vehicle GHG Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix Statewide.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.
6. Regional Transportation-Related GHG Targets. Develop regional GHG emissions reduction targets for passenger vehicles.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.



10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010. Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. High-Speed Rail. Support implementation of a high-speed rail system.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings.
14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO<sub>2</sub>eq/year.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 5.10-2, Scoping Plan Consistency Analysis, summarizes the Project’s consistency with the CARB Scoping Plan. As summarized, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports four of the action categories through energy efficiency, water conservation, recycling, and landscaping.

**Table 5.10-2  
Scoping Plan Consistency Analysis**

Action	Supporting Measures <sup>1</sup>	Consistency
Cap-and-Trade Program	--	<b>Not Applicable.</b> These programs involve capping emissions from large-scale electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect light industrial or smaller-scale industrial projects.



Table 5.10-2 [continued]  
Scoping Plan Consistency Analysis

Action	Supporting Measures <sup>1</sup>	Consistency
Light-Duty Vehicle Standards	T-1	<b>Not Applicable.</b> This is a Statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	<b>Consistent.</b> The Project would include a variety of building, water, and solid waste efficiencies consistent with 2016 California Green Building Standards Code requirements.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	<b>Not Applicable.</b> Establishes the minimum Statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	<b>Not Applicable.</b> Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related GHG Targets	T-3	<b>Not Applicable.</b> This is a Statewide measure and is not within the purview of the Project.
Vehicle Efficiency Measures	T-4	<b>Not Applicable.</b> Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	<b>Not Applicable.</b> Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and would be voluntary, the Project would not interfere with their implementation.
	T-6	
Million Solar Roofs Program	E-4	<b>Not Applicable.</b> The Million Solar Roofs Program sets a goal for use of solar systems throughout the State as a whole.
Medium- & Heavy-Duty Vehicles	T-7	<b>Not Applicable.</b> The Project does not anticipate Medium- and heavy-duty trucks and trailers usage on site.
	T-8	
Industrial Emissions	I-1	<b>Not Applicable.</b> These measures are applicable to large industrial facilities (greater than 500,000 MTCO <sub>2</sub> eq/year) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	<b>Not Applicable.</b> Supports increased mobility choice.
Green Building Strategy	GB-1	<b>Consistent.</b> The Project would include a variety of building, water, and solid waste efficiencies consistent with 2016 California Green Building Standards Code requirements.
High Global Warming Potential Gases	H-1	<b>Not Applicable.</b> The proposed Project buildings are not substantial sources of high GWP emissions and would comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	<b>Consistent.</b> The Project would be required recycle a minimum of 50 percent from construction activities and operations per State and County requirements.
	RW-2	
	RW-3	



**Table 5.10-2 [continued]  
Scoping Plan Consistency Analysis**

Action	Supporting Measures <sup>1</sup>	Consistency
Sustainable Forests	F-1	<b>Not Applicable.</b> The Site is designated Light Industrial in the General Plan and zoned West End Light Industrial (DWL) in the City's Zoning Code.
Water	W-1	<b>Consistent.</b> The Project would include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	<b>Not Applicable.</b> The Site is designated Light Industrial in the General Plan and zoned West End Light Industrial (DWL) in the City's Zoning Code.
Notes:		
1. California Air Resources Board, <i>Appendix B Status of Initial Scoping Plan Measures</i> , <a href="http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf">http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf</a> , accessed August 22, 2018.		

### SB 32 CONSISTENCY

SB 32 requires the State to reduce Statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving Executive Order S-3-05, which sets a Statewide GHG reduction target of 80 percent below 1990 levels by 2050.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California Lawrence Berkeley National Laboratory (LBNL) GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 MTCO<sub>2</sub>eq per year, “indicating that existing State policies will likely allow California to meet its target [of 2020 levels under AB 32].” CALGAPS also showed that by 2030, emissions could range from 211 to 428 MTCO<sub>2</sub>eq per year, indicating that “even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32].” CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Though the research indicated that the emissions would not meet the State’s 80 percent reduction goal by 2050, various combinations of policies could allow California’s cumulative emissions to remain very low through 2050.

The Project would not interfere with the State’s implementation of (i) Executive Order B-30-15 and SB 32’s target of reducing Statewide GHG emissions to 40 percent below 1990 levels by 2030 or (ii) Executive Order S-3-05’s target of reducing Statewide GHG emissions to 80 percent below 1990 levels by 2050, as it does not interfere with the State’s implementation of GHG reduction plans



described in the Scoping Plan. Specifically, the Project would not interfere with Scoping Plan goals of the State providing 12,000 megawatts of renewable energy by 2020 or the existing building retrofits under AB 758. Therefore, the Project's impacts on GHG emissions in the 2030 and 2050 horizon years would be less than significant. In addition, the Project does not exceed the applicable numeric SCAQMD threshold and does not result in a significant impact with respect to GHG emissions. Therefore, a less than significant impact finding with respect to this criterion would occur.

## SB 100 CONSISTENCY

SB 100 requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, 60 percent by December 31, 2030, and 100 percent by December 31, 2045. The bill would require that the achievement of this policy for California not increase carbon emissions elsewhere in the western grid and that the achievement not allow resource shuffling. The bill would also require the CPUC and the CEC, in consultation with the state board, to take steps to ensure that a transition to a zero-carbon electric system for the State of California does not cause or contribute to greenhouse gas emissions increases elsewhere in the western grid. In addition, the bill would require the CPUC, CEC, state board, and all other state agencies to incorporate that policy into all relevant planning.

The Project would not conflict with SB 100 as the Project is not a local publicly owned electric utility and would rely on energy transmission from a local publicly owned electric utility, which would abide with SB 100 and the amended PUC code. Additionally, the Project is consistent with SB 32 and would not exceed the applicable numeric SCAQMD threshold and would not result in a significant impact with respect to GHG emissions. Therefore, a less than significant impact finding with respect to this criterion would occur.

**Standard Conditions of Approval:** No standard conditions of approval are applicable.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance:** Less Than Significant Impact.

## 5.10.5 CUMULATIVE IMPACTS

Table 4-1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the Project to the extent that a significant cumulative effect may occur. The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

## GREENHOUSE GAS EMISSIONS

- Would greenhouse gas emissions generated by the Project and other related cumulative projects have a cumulatively considerable impact on global climate change?



**Impact Analysis:** It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.<sup>15</sup> GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.<sup>16</sup> Therefore, significant direct impacts associated with the Project, as discussed in Impact Statement GHG-1, also serve as the Project's cumulative impact.

Additionally, GHG emissions would not exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO<sub>2</sub>eq/year. Therefore, cumulative GHG emissions impacts from the Project would not be significantly cumulatively considerable, and a less than significant impact would occur in this regard.

**Standard Conditions of Approval:** No standard conditions of approval are applicable.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance:** Less Than Significant Impact.

## **CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS**

- Would implementation of the Project and other related cumulative projects could cause a cumulatively considerable conflict with an applicable greenhouse gas reduction plan, policy, or regulation?

**Impact Analysis:** As stated above, GHG impacts are recognized as exclusively cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. As such, significant direct impacts associated with the Project, as discussed in Impact Statement GHG-2, also serve as the Project's cumulative impact. The analysis above concludes that the Project would be consistent with the Scoping Plan and would not interfere with the goals of SB 32. In addition, the Project-generated GHG emissions would not exceed the SCAQMD's recommended numeric threshold of 3,000 MTCO<sub>2</sub>eq/year. Thus, cumulative GHG impacts under the Project would be less than significant.

**Standard Conditions of Approval:** No standard conditions of approval are applicable.

**Mitigation Measures:** No mitigation measures are required.

**Level of Significance:** Less Than Significant Impact.

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<sup>15</sup> California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008, <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf>, accessed August 30, 2018.

<sup>16</sup> Ibid.



## **5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS**

No significant unavoidable impacts related to greenhouse gas emissions have been identified for the proposed Project.



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