

3.1.4 Greenhouse Gas Emissions

This section of the Environmental Impact Report (EIR) evaluates the environmental effects of greenhouse gas (GHG) emissions that may result directly or indirectly from the project. The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical studies prepared for the proposed project, which were prepared in accordance with the *Final 2024 Climate Action Plan* (2024 CAP) (County of San Diego 2024a) and the *2024 CAP Consistency Checklist and Guidelines for Determining Significance* (County of San Diego 2024b):

- *Starlight Solar Air Quality and Greenhouse Gas Technical Study* (Yorke Engineering, LLC 2024a) (Appendix H.1 of this EIR)
- *Starlight Solar Project – Air Quality and Greenhouse Gas Technical Study Memorandum – Project Design Update* (Yorke Engineering, LLC 2024b) (Appendix H.2 of this EIR)
- *2024 Climate Action Plan Consistency Review Checklist for Starlight Solar* (SWCA Environmental Consultants [SWCA] 2025) (Appendix H.3 of this EIR)
- *Starlight Solar Project – Air Quality and Greenhouse Gas Technical Study Memorandum – Fugitive Dust Control Measures Update* (Yorke Engineering, LLC 2025) (Appendix H.4 of this EIR)

Comments received in response to the Notice of Preparation (NOP) include concerns regarding the evaluation of the cumulative GHG impacts of the project. These concerns are addressed in this section of the EIR where applicable. Copies of the NOP and comment letters received in response to the NOP are included in Appendix A, NOP, Initial Study, and Public Comments, of this EIR.

3.1.4.1 Existing Conditions

This section describes the existing setting in the project area and identifies the resources that could be affected by the project.

Climate Change

Global climate change refers to the changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere, in much the same way as glass traps heat in a greenhouse. The Earth's climate is changing because human activities, primarily the combustion of fossil fuels, are altering the chemical composition of the atmosphere through the buildup of GHGs. GHGs are released by the combustion of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect. Although climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy.

Regarding the adverse effects of global warming, as reported by AB 32, California Global Warming Solutions Act of 2006: "Global warming poses a serious threat to the economic well-being, public health, natural resources and the environment of California" (California Air Resources Board [CARB] 2006). Over the past few decades, the energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in carbon dioxide (CO₂) emissions from fossil fuel consumption per unit of gross state product. However, in terms of total

CO₂ emissions, California is second only to Texas in the nation and is the 16th largest source of climate change emissions in the world, exceeding most nations (U.S. Energy Information Administration 2019).

Other states with fewer than 9.5 metric tons (MT) per capita of energy-related CO₂ emissions include California, Massachusetts, Oregon, and Rhode Island. The national average is 16 MT per capita.

Greenhouse Gases

GHGs include CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Carbon is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential (GWP) than CO₂. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO₂, denoted as carbon dioxide equivalent (CO₂e). Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. The primary GHGs attributed to global climate change are described below.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Anthropogenic sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Anthropogenic sources of CO₂ amount to over 30 billion tons per year, globally (Friedlingstein et al. 2022). Natural sources release substantially larger amounts of CO₂. However, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of human-made CO₂. Consequently, the gas is building up in the atmosphere.

Methane

CH₄ is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH₄ emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation in livestock, manure management, and rice cultivation are also significant sources of CH₄ in California.

Nitrous Oxide

N₂O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion produce N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are used primarily as substitutes for ozone (O₃)-depleting substances regulated under the Montreal Protocol (1987), an international treaty that was approved on January 1, 1989, and was designated to protect the O₃ layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for O₃ depletion. PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and

magnesium casting. There is no primary aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs.

The magnitude of the impact on global warming differs among the GHGs. The effect each GHG has on climate change is measured as a combination of the volume of its emissions and its GWP. GWPs are one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system, expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds or tons of CO₂e. GWP are based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO₂. The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period. HFCs, PFCs, and SF₆ have a greater GWP than CO₂. In other words, these other GHGs have a greater contribution to global warming than CO₂ on a per-mass basis. However, CO₂ has the greatest impact on global warming because of the relatively large quantities of CO₂ emitted into the atmosphere.

A summary of the atmospheric lifetime and GWP of selected gases is presented in Table 3.1.4-1. As indicated in this table, GWPs range from 1 to 23,500 based on IPCC assessment reports. IPCC has released three assessment reports (AR4, AR5, and AR6) (IPCC 2007, 2013, 2021) with updated GWPs; however, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards. By applying the GWP ratios, project-related equivalent mass of CO₂, denoted as CO₂e emissions, can be tabulated in MT per year.

Table 3.1.4-1. Global Warming Potentials

Greenhouse Gas	GWP Values for 100-year Time Horizon		
	AR4	AR5	AR6
Carbon dioxide (CO ₂)	1	1	1
Methane (CH ₄)	25	28	Fossil origin – 29.8 Non-fossil origin – 27.2
Nitrous oxide (N ₂ O)	298	265	273
Select hydrofluorocarbons (HFCs)	124–14,800	4–12,400	–
Sulfur hexafluoride (SF ₆)	22,800	23,500	24,600

Source: IPCC (2007, 2013, 2021)

3.1.4.2 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, CARB and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

Federal Regulations

Clean Air Act

At the federal level, the EPA has been charged with implementing the national air quality programs. The backbone of the EPA's air quality mandate is the federal Clean Air Act (CAA) signed into law in 1970 and the subsequent Clean Air Act Amendments (CAAA) of 1977 and 1990. Although the EPA deals primarily with international, national, and interstate air pollution, the CAA and CAAA grant authority to the EPA to regulate air pollution on many levels. On the state level, the EPA is responsible for oversight of a state's air quality programs. In addition, the EPA sets federal vehicle and stationary source emission standards and provides research and guidance for state and regional/local air quality programs.

Under the CAA and CAAA, the EPA established National Ambient Air Quality Standards (NAAQS) for O₃, carbon monoxide (CO), nitrogen dioxide (NO₂), SO₂, and particulate matter 10 microns in diameter or smaller (PM₁₀) and 2.5 microns in diameter or smaller (PM_{2.5}). The NAAQS represent the allowable atmospheric concentrations at which the public health and welfare are protected and include a reasonable margin of safety to protect the more sensitive receptors in the population. Since the elimination of lead (Pb) from motor gasoline in the mid-1970s, lead concentrations in ambient air have substantially decreased in most areas. However, elevated lead concentrations can persist in the vicinity of industrial sources, e.g., lead-acid battery recycling and manufacturing, and near general aviation airports because lead is still used to formulate high-octane aviation gasoline for piston engines.

In addition, the CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The CAAA of 1990 requires states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution.

Federal Greenhouse Gas Policy

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

On April 17, 2009, EPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the *Federal Register* under Docket ID No. EPA-HQ-OAR-2009-0171. The EPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The EPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the EPA Administrator on December 7, 2009. The final findings were published in the *Federal Register* on December 15, 2009. The final rule was effective on January 14, 2010. Although these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by EPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On July 20, 2011, EPA published its final rule deferring GHG permitting requirements for CO₂ emissions from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups challenged the deferral. In September 2011, EPA released *Accounting Framework for Biogenic CO₂ Emissions from*

Stationary Sources, which analyzes accounting methodologies and suggests implementation for biogenic CO₂ emitted from stationary sources (EPA 2011).

On April 4, 2012, EPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel-fired generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO₂ per MW-hour (MWh) on an average annual basis, subject to certain exceptions.

On April 17, 2022, EPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under 40 Code of Federal Regulations (CFR) 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.

State Regulations

California Renewables Portfolio Standard

In 2002, Senate Bill (SB) 1078 established California's Renewables Portfolio Standard (RPS) program. The RPS program requires electrical corporations and electric service providers to purchase a specified minimum percentage of electricity generated by eligible renewable energy resources. The bill requires the CEC to certify eligible renewable energy resources, to design and implement an accounting system to verify compliance with the RPS by retail sellers, and to allocate and award supplemental energy payments to cover above-market costs of renewable energy. Under SB 1078, each electrical corporation was required to increase its total procurement of eligible renewable energy resources by at least 1% per year so that 20% of its retail sales were procured from eligible renewable energy resources.

In 2006, SB 107 accelerated the RPS program by establishing a deadline of December 31, 2010, for achieving the goal of having 20% of total electricity sold to retail customers in California per year generated from eligible renewable energy resources.

The RPS goal was increased to 33% when Governor Schwarzenegger signed Executive Order (EO) S-14-08 in November 2008. EO S-14-08 was later superseded by EO S-21-09 on September 15, 2009. EO S-21-09 directed CARB to adopt regulations requiring 33% of electricity sold in the state to come from renewable energy by 2020. This EO was superseded by Statute SB X1-2 in 2011, which modified the California RPS program to require that both public- and investor-owned utilities in California receive at least 33% of their electricity from renewable sources by the year 2020. SB 2X1-2 also requires regulated sellers of electricity to meet an interim milestone of procuring 25% of their energy supply from certified renewable sources by 2016.

California Global Warming Solution Act

Over the past 20 years, California has set numerous GHG emission reduction goals. Starting in 2005, Governor Schwarzenegger implemented EO S-3-05, which was codified in Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). AB 32 committed to achieving the following:

- By 2010, reduce to 2000 emission levels
- By 2020, reduce to 1990 emission levels
- By 2050, reduce to 80% below 1990 levels

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

SB 32, signed on September 8, 2016, updates AB 32 to include an emissions reduction goal for the year 2030. Specifically, SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 level by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

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

In 2022, Governor Gavin Newsom signed AB 1279, the California Climate Crisis Act. AB 1279 requires the state to achieve net zero GHG emissions (carbon neutrality) as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85% compared to 1990 levels and directs CARB to work with relevant state agencies to achieve these goals.

Climate Change Scoping Plan

In 2008, CARB approved the *Climate Change Scoping Plan: a framework for change* (2008 Scoping Plan) (CARB 2008), as required by AB 32. The 2008 Scoping Plan identified a cap-and-trade program as one of the strategies for California to reduce GHG emissions. The cap-and-trade program is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85% of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and they apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to the cap-and-trade rules. At that stage, the program will encompass approximately 360 businesses throughout California and nearly 85% of the state's total GHG emissions. Covered entities subject to the cap-and-trade program are sources that emit more than 25,000 MT CO₂e per year. Triggering of the 25,000 MT CO₂e per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012. California's GHG cap-and-trade system has reduced GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80% reduction from 1990 levels by 2050.

Subsequently, CARB approved updates of the 2008 Scoping Plan in 2014 and 2017, with the 2017 update considering SB 32 (adopted in 2016) in addition to AB 32 (CARB 2014, 2017). The 2014 update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals (to the level of 427 million MT CO₂e) defined in the original 2008 Scoping Plan. It also evaluated how to align

the state's longer-term GHG reduction strategies with other state policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use. In November 2022, the final *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) was released. The 2022 Scoping Plan assesses progress toward the statutory 2030 target and lays out a path to achieving carbon neutrality no later than 2045 (CARB 2022). It also focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97

SB 97 was enacted in 2007. SB 97 required the Governor's Office of Land Use and Climate Innovation (formerly known as the Governor's Office of Planning and Research [OPR]) to develop, and the California Natural Resources Agency (CNRA) to adopt, amendments to the State California Environmental Quality Act (CEQA) Guidelines addressing the analysis and mitigation of GHG emissions (OPR 2008, 2018). Those State CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the CNRA developed the *Final Statement of Reasons for Regulatory Action* (CNRA 2009) explaining the legal and factual bases, intent, and purpose of the State CEQA Guidelines amendments. The amendments to the State CEQA Guidelines implementing SB 97 became effective on March 18, 2010. SB 97 applies to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

Assembly Bill 197

AB 197, signed on September 8, 2016, is a bill linked to SB 32 that prioritizes efforts to reduce GHG emissions in low-income and minority communities. AB 197 requires CARB to make available, and update at least annually on its website, the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two members of the legislature to the CARB board as ex officio, non-voting members, and creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the legislature concerning the state's programs, policies, and investments related to climate change.

Advanced Clean Car Regulations

In 2012, CARB approved the Advanced Clean Cars program, a new emissions control program for model years 2015 through 2025. The components of the advanced clean car standards include the Low-Emission Vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty

vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs, with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years period. In March 2017, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV programs for cars and light trucks sold in California through 2025.

Senate Bill 375

SB 375 requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region. If the SCS is unable to achieve the regional GHG emissions reductions targets, the Metropolitan Planning Organization is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target can be achieved through alternative development patterns, infrastructure, and/or transportation measures.

As required under SB 375, CARB is required to update regional GHG emission targets every 8 years, with the last update formally adopted in March 2018. As part of the 2018 update, CARB adopted a passenger vehicle-related GHG reduction target of 19% by 2035 for the Southern California Association of Governments region, which is more stringent than the previous reduction target of 13% for 2035.

Local Regulations

San Diego County Air Pollution Control District

The San Diego County Air Pollution Control District (SDAPCD) is a County of San Diego (County) agency with the authority to regulate stationary, indirect, and area sources of air pollution (e.g., power plants, highway construction, and housing developments) within the San Diego Air Basin (SDAB).

The SDAPCD is primarily responsible for the control of air pollution from all sources other than emissions from motor vehicles (mobile sources), which are the responsibility of CARB and the EPA. Under federal and state law, the SDAPCD is required to adopt and enforce rules and regulations to achieve NAAQS and California Ambient Air Quality Standards and implement applicable federal and state laws. Since the passage of the California Clean Air Act and the CAAA, this role has been expanded to include the implementation of transportation control measures and indirect source control programs to reduce mobile source emissions.

SDAPCD Regulation II: Permits; Rule 20.2: New Source Review Non-Major Stationary Sources requires new or modified stationary source units (that are not major stationary sources) with the potential to emit 10 pounds (lbs) per day or more of volatile organic compounds (VOCs), nitrogen oxide (NO_x), sulfur oxide (SO_x), or PM₁₀ to be equipped with best available control technology. For those units with a potential to emit above air quality impact assessment trigger levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any national air quality standard (SDAPCD 2019).

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions prohibits discharge into the atmosphere, from any single source of emissions whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997). Construction of the project may result in visible emissions, primarily during earth-disturbing activities, which would be subject to SDAPCD Rule 50. Although visible emissions

are less likely to occur during operation of the project, compliance with SDAPCD Rule 50 would be required during both construction and operation.

San Diego County General Plan

The *San Diego County General Plan: A Plan for Growth, Conservation, and Sustainability* (General Plan) (County of San Diego 2011a) takes steps to address energy by including policies for improving energy efficiency, reducing waste, recycling, and managing water use. The General Plan also seeks to reduce energy consumption through minimizing vehicle miles traveled; approving land use patterns that support increased density in areas where there is infrastructure to support it; creating increased opportunities for transit, pedestrians, and bicycles; and encouraging and approving green building and land development conservation initiatives. Climate change and GHG reduction policies are addressed in plans and programs in multiple elements of the General Plan.

The strategies for reduction of GHG emissions in the General Plan are as follows (County of San Diego 2011a):

- Strategy A-1: Reduce vehicle trips generated, gasoline/energy consumption, and GHG emissions.
- Strategy A-2: Reduce non-renewable electrical and natural gas energy consumption and generation (energy efficiency).
- Strategy A-3: Increase generation and use of renewable energy sources.
- Strategy A-4: Reduce water consumption.
- Strategy A-5: Reduce and maximize reuse of solid wastes.
- Strategy A-6: Promote carbon dioxide consuming landscapes.
- Strategy A-7: Maximize preservation of open spaces, natural areas, and agricultural lands.

The General Plan also includes climate adaptation strategies to deal with potential adverse effects of climate change. The climate adaptation strategies include the following (County of San Diego 2011a):

- Strategy B-1: Reduce risk from wildfire, flooding, and other hazards resulting from climate change.
- Strategy B-2: Conserve and improve water supply due to shortages from climate change.
- Strategy B-3: Promote agricultural lands for local food production.
- Strategy B-4: Provide education and leadership.

The County General Plan's Conservation and Open Space Element also includes goals and policies that are designed to reduce GHG emissions by enhancing the efficiency of energy use in buildings and infrastructure, and by promoting the use of renewable energy sources, conservation, and other methods of efficiency. The pertinent goals are identified below (County of San Diego 2011b):

- **Goal COS-14, Sustainable Land Development.** Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.
 - **COS-14.1: Land Use Development Form.** Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.

- **COS-14.3: Sustainable Development.** Require design of residential subdivisions and nonresidential development through “green” and sustainable land development practices to conserve energy, water, open space, and natural resources.
- **COS-14.7: Alternative Energy Sources** for Development Projects. Encourage development projects that use energy recovery, photovoltaic, and wind energy.
- **Goal COS-15, Sustainable Architecture and Buildings.** Building design and construction techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health and contributing to a more sustainable environment.
 - **COS-15.4: Title 24 Energy Standards.** Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.
- **Goal COS-16, Sustainable Mobility.** Transportation and mobility systems that contribute to environmental and human sustainability and minimize GHG and other air pollutant emissions.
- **Goal COS-17, Sustainable Solid Waste Management.** Perform solid waste management in a manner that protects natural resources from pollutants while providing sufficient, long term capacity through vigorous reduction, reuse, recycling, and composting programs.
 - **COS-17.2: Construction and Demolition Waste.** Require recycling, reduction and reuse of construction and demolition debris.
- **Goal COS-18, Sustainable Energy.** Energy systems that reduce consumption of nonrenewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities.
- **Goal COS-19, Sustainable Water Supply.** Conservation of limited water supply supporting all uses including urban, rural, commercial, industrial, and agricultural uses.
 - **COS-19.1: Sustainable Development Practices.** Require land development, building design, landscaping, and operational practices that minimize water consumption.
- **Goal COS-20, Governance and Administration.** Reduction of community-wide (i.e., unincorporated county) and County operations GHG emissions contributing to climate change that meet or exceed requirements of the Global Warming Solutions Act of 2006, as amended by Senate Bill 32 (as amended, Pavley. California Global Warming Solutions Act of 2006: emissions limit) and Assembly Bill 1279 (2022), to achieve net zero greenhouse gas emissions no later than 2045.
 - **COS-20.1: Climate Action Plan.** Prepare, maintain, and implement a Climate Action Plan for the reduction of community-wide (i.e., unincorporated county) and County operations GHG emissions consistent with the California Environmental Quality Act (CEQA) Guidelines Section 15183.5 (or as amended).
 - **COS-20.2: GHG Monitoring and Implementation.** Establish and maintain a program to monitor GHG emissions attributable to development, transportation, infrastructure, and municipal operations and periodically review the effectiveness of and revise existing programs as necessary to achieve GHG emission reduction objectives.

San Diego County 2024 Climate Action Plan

The County has developed the 2024 CAP Update (County of San Diego 2024a), a comprehensive strategy to reduce GHG emissions in its unincorporated communities and from County operations. In July 2024, the Planning Commission recommended adoption of the final 2024 CAP to the County Board of Supervisors. On September 11, 2024, the County Board of Supervisors adopted the 2024 CAP (County of San Diego 2025). The 2024 CAP identifies strategies, measures, and actions to meet the County’s targets to reduce GHG emissions by 2030 and 2045, consistent with the state’s 2022 Scoping Plan for Achieving Carbon

Neutrality and legislative GHG reduction targets and demonstrates progress toward the state's 2045 net zero GHG emissions goal. The CAP's attainment of the County's GHG reduction targets is the result of (1) several initiatives to be directly implemented by the County and (2) incorporating GHG reduction features into the construction and operation of development projects (including County-initiated and privately initiated projects).

In order to demonstrate consistency with the 2024 CAP, the County has developed the *2024 Climate Action Plan Consistency Review Checklist for Starlight Solar* (CAP Consistency Checklist). The checklist establishes a two-step process to determine if a project is consistent with the CAP. Step 1 of the checklist evaluates a project's consistency with the growth projections used in the CAP to estimate future GHG emissions from activities in unincorporated areas of San Diego County. Since the CAP uses growth projections based on the adopted General Plan, the first step in determining a project's consistency with the CAP is to demonstrate its alignment with the regional categories and land use designations of the General Plan. All projects must show consistency with the existing General Plan regional categories, land use designations, and the uses and development density and intensity allowed under the Zoning Ordinance. If a project is consistent with the General Plan, then Step 2 of the checklist should be completed. If a project is not consistent with the regional categories or land use designations of the General Plan, it cannot use the CAP Consistency Checklist for CEQA streamlining. Step 2 of the checklist outlines CAP measures and actions as "consistency requirements" that project proponents must incorporate into their projects to demonstrate compliance with the CAP. Projects are required to show consistency with the CAP requirements or explain why the requirements are not applicable. Appendix H.3 presents the CAP Consistency Checklist.

Renewable Energy Plan

The *County of San Diego Renewable Energy Plan* (Renewable Energy Plan) (Brummitt Energy Associates Inc. and Dersch Design & Engineering 2019) presents research for development of renewable energy options in San Diego County. The planning effort covers the residential, commercial, and industrial sectors of San Diego County, with a particular focus on unincorporated areas, and presents a comprehensive approach to renewable energy and energy efficiency.

Boulevard Subregional Plan

The project site is located within the Mountain Empire Subregion in the Boulevard Subregional Planning Area. The following policy from the *Boulevard Subregional Planning Area, Mountain Empire Subregional Plan* is relevant to greenhouse gas emissions (County of San Diego 2013):

- **CM 8.6.1.** Encourage the use of existing right-of-way when construction of new transmission lines is required, where technically and economically feasible. Additionally, encourage existing right-of-way over new right-of-way alignments for construction of new transmission lines, when existing right-of-way is insufficient.

3.1.4.3 Analysis of Project Effects and Determination as to Significance

For the purpose of this EIR, Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and the County's *2024 CAP Consistency Checklist and Guidelines for Determining Significance for Climate Change* (County of San Diego 2024b) apply to both the direct impact analysis and the cumulative impact analysis. According to the County Guidelines:

- A proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County’s Climate Action Plan; and, would normally have a cumulatively considerable contribution to climate change impacts if it is found to be inconsistent with the County’s Climate Action Plan.

Consistency with the CAP is determined through the CAP Consistency Review Checklist, which is provided as Appendix 8 to the CAP. The checklist, in conjunction with the CAP, provides a streamlined CEQA review process for proposed discretionary projects. The checklist is the mechanism that is used to demonstrate consistency with the CAP. If a project does not comply with applicable consistency requirements in the checklist, it would be determined to be inconsistent with the CAP (San Diego County 2024b). Therefore, as stated above, the CAP Consistency Checklist (see Appendix H.3) was prepared for the proposed project.

Further, according to Appendix G, significant impact would result if the project would:

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

Methodology

The construction analysis was performed using California Emissions Estimator Model (CalEEMod) version 2022 (California Air Pollution Control Officers Association [CAPCOA] 2022), the official statewide land use computer model designed to provide a uniform platform for estimating potential GHG emissions associated with land use projects under CEQA. The model quantifies direct emissions from construction (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model—published by CARB—include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and mitigation measures to reduce GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by CAPCOA in collaboration with the California air districts. Default land use 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. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis. Using CalEEMod, direct on-site and off-site and indirect GHG emissions were estimated for the construction phase of the project.

Direct GHG Emissions

GHGs are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources such as on-road vehicles and off-road construction equipment burning fuels such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied).

Indirect GHG Emissions

Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills (CARB 2017).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the SDAB would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

Although the proposed project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance of a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no noncumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB 97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009). Similarly, the *Final Statement of Reasons for Regulatory Action* confirms that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009). Accordingly, further discussion of the project's GHG emissions and their impact on global climate are addressed in Section 3.1.4.4.

Indirect and Direct GHG Emissions

Guidelines for the Determination of Significance

According to Appendix G, the project would have a significant impact related to GHG emissions if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

Analysis

Construction of the project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor trucks, and worker vehicles. Total GHG emissions from all phases of construction activities were amortized over the estimated 30-year life of the project and added to the annual operational emissions of GHGs. The project would offset GHG emissions through renewable energy generation and thereby result in environmental benefits by lessening the impacts of global climate change; as such, the annual displaced GHG emissions were estimated to include all direct and indirect emissions associated with implementation of the project. Project decommissioning emissions were not calculated, as the equipment and fuel types that would exist 30 or more years in the future are unknown. However, it is anticipated that the decommissioning emissions would be lower than the construction emissions.

Construction Emissions

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described (see Appendix H.1 and Appendix H.4). Construction of the project is anticipated to last approximately 18 months. Construction emissions were also amortized over a 30-year project lifetime. On-site sources of GHG emissions include off-road equipment and off-site sources including haul trucks, vendor trucks, and worker vehicles. Table 3.1.4-2 presents the total annual construction GHG emissions of the project.

Table 3.1.4-2. Construction-related Greenhouse Gas Emissions

Greenhouse Gas	Unmitigated Emissions (MT)	Unmitigated Emissions Amortized Over 30 Years (MT/year)
CO ₂	3,100	103
CH ₄	0.140	0.005
N ₂ O	0.180	0.006
Total CO₂e	3,158	105

Source: Yorke Engineering, LLC (2025) (Appendix H.4)

As shown in Table 3.1.4-2, the estimated total GHG emissions during construction would be approximately 3,158 MT CO₂e over the construction period. Estimated project-generated construction emissions amortized over 30 years would be approximately 105 MT CO₂e per year. GHG emissions generated during construction of the project would occur only when construction is active, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operations

The term “project operations” refers to the full range of activities that can or may generate GHG emissions when the project is functioning in its intended use. Typically, for renewable energy projects, motor vehicles traveling to and from the project site represent the primary source of GHG emissions. As discussed in the Transportation Impact Assessment (Kittelson & Associates 2024) (Appendix K.1), operational trip generation for the project will be nominal. During operations, the project would be an unoccupied facility that would be monitored remotely. As a part of routine maintenance, the PV panels would only be washed once per year. Occasional inspections and repairs would only occur when necessary and would generate a nominal amount of daily vehicle trips. Therefore, operational GHG emissions of the project would be limited to the occasional use of maintenance vehicles and as-needed use of small utility equipment. As such, it is anticipated that the operational emissions would be minimal compared to the reduction of GHG emissions provided by the project’s generation of renewable energy.

Future Decommissioning

The aboveground (detachable) equipment and structures would be disassembled and removed from the site when the facility reaches the end of its useful economic life, assumed to be 30 years in service. Detachable elements include all photovoltaic modules and support structures, battery storage units, inverters, transformers, and associated controllers. Fencing, substation, and aboveground conductors on the transmission facilities would be removed next. Underground collector and transmission components would then be removed. Most of these materials would be recycled or reclaimed. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of off-site, consistent with the County’s Construction and Demolition Debris Recycling Ordinance (San Diego County Code of Regulatory Ordinances, 68.508 through 68.518). The activities associated with decommissioning would be similar to those required for project construction; however, decommissioning of the project is not expected

to include substantial earthmoving, such as grading. Therefore, it is expected that the GHG emissions from decommissioning the solar facility and BESS would be less than the emissions generated during construction, because no substantial earthmoving would be necessary. Conservatively, future decommissioning of the project is estimated to generate a total of 3,158 MT CO₂e, or 105 MT CO₂e amortized over an expected project lifetime of 30 years.

Carbon Sequestration

The project site encompasses approximately 588 noncontiguous acres within the Mountain Empire Subregion in unincorporated San Diego County, which is within the SDAB. Consistent with CalEEMod 2022 Appendix G-42, the project site can be characterized as desert “shrubland” with a carbon sequestration capacity of 2.38 MT carbon per acre per year. Thus, for the entire project site, approximately 1,400 MT per year of carbon sequestration capacity would be eliminated due to the loss of natural vegetation (Appendix H.1).

Upon completion, the 100-MW project would be expected to generate approximately 300 gigawatt-hours (GWh) per year of carbon-free electric power. Per 40 CFR 98 Subpart C, natural gas combustion has a CO₂ emission factor of 117 lbs per million British thermal units (lbs/MMBtu). For a modern natural gas-fired combined cycle generating unit, the calculated CO₂ emission intensity is approximately 800 pounds CO₂ per MWh, or 363 MT CO₂ per GWh, which is equivalent to 99 MT of carbon per GWh. Thus, the output of the project would avoid approximately 29,700 MT per year of carbon emissions compared to combined cycle generation, for a net carbon avoidance of approximately 28,300 MT per year when sequestration loss is considered.

Conclusion

The project would generate approximately 3,158 MT CO₂e during the 30-month construction period (assuming Phase II is constructed immediately following construction of Phase I), or 105 MT CO₂e per year amortized over an expected project lifetime of 30 years. As previously discussed, emissions during operations would be minimal as the project would be remotely operated and would generate a nominal amount of annual vehicle trips. Activities associated with decommissioning of the project would be similar to those required for project construction. Therefore, it is conservatively estimated that future decommissioning of the project would similarly generate a total of 3,158 MT CO₂e, or 105 MT CO₂e per year amortized over an expected project lifetime of 30 years. Further, implementation of the project would result in 1,400 MT CO₂e per year in indirect emissions due to the reduction of the carbon sequestration capacity of the project site. In total, the project would result in approximately 1,611 MT per year of combined direct and indirect CO₂e emissions. Table 3.1.4-3 presents the total direct and indirect GHG emissions of the project over an expected 30-year lifetime.

Table 3.1.4-3. Direct and Indirect Greenhouse Gas Emissions Summary

Source of CO ₂ e Emissions	Total Emissions Over 30 Years (MT)	Annual Emissions (MT/year)
Construction	3,158	105
Decommissioning	3,158	105
Vegetation Removal	42,000	1,400
Total	48,316	1,611

However, approximately 29,700 MT per year of carbon emissions would be avoided by the output of carbon-free electric power produced by the project. The project’s annual indirect GHG emissions from the displacement of fossil fuel-fired electricity generation is significantly higher than the project’s annualized

direct and indirect emissions sources; as such, the overall effect of the project would reduce GHG emissions. Therefore, the project would not generate GHG emissions, either directly or indirectly, that would have an adverse effect on the environment, and the project would have a **less-than-significant impact**.

Conflict with an Applicable Plan, Policy, or Regulation Adopted to Reduce GHG Emissions

Guidelines for the Determination of Significance

According to Appendix G, the project would have a significant impact related to GHG emissions if it would:

- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Further, according to the County Guidelines:

- A proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan; and, would normally have a cumulatively considerable contribution to climate change impacts if it is found to be inconsistent with the County's Climate Action Plan.

Analysis

Appendix 08 of the County's 2024 CAP includes guidelines for determining a project's significance regarding climate change. The guidelines state that "a proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan" (County of San Diego 2024b). As such, a CAP Consistency Checklist was prepared for the project, based on the template provided by the County, which demonstrates that the project would be consistent with the County's CAP (Appendix H.3). Table 3.1.4-4 summarizes the project's consistencies with the 2024 CAP requirements.

Table 3.1.4-4. Project Consistency with 2024 CAP Requirements

CAP Requirement	Project Consistency
Step 1: Demonstrate Consistency with the General Plan	
Requirement 1. Is the proposed project consistent with the existing General Plan regional category and land use designations	Consistent. The County's General Plan identifies that the project site is within the rural regional category, and designates the project site as Rural Lands 80 (RL-80). The County's Zoning Ordinance identifies the site as General Rural (S92). The project would be considered a Major Impact Service and Utility and, under Section 1355 of the Zoning Ordinance, which is an allowable use with the approval of a Major Use Permit (MUP). According to Section 1350 of the Zoning Ordinance, Major Impact Services and Utilities may be conditionally permitted in any zone if it is determined that public interest supersedes the usual limitations placed on land use and transcends the usual restraints of zoning for reasons of necessary location and community-wide interest. The MUP process considers the location, size, and operating characteristics of the proposed use and must find that the project would be compatible with adjacent uses with consideration given to the following: harmony in scale; availability of public facilities, services and utilities; effect on desirable neighborhood character; generation of traffic; and suitability of the site for type and intensity of use (Section 7358). The application for a MUP would be processed

CAP Requirement	Project Consistency
	according to Section 7350 of the Zoning Ordinance, including making required findings pursuant to Section 7358. In accordance with Section 6954(b)(3), the project would be subject to requirements related to setback, height, visual, and security. The MUP would also be referred to the Boulevard Community Design Review Board, pursuant to Section 7355. Therefore, the project would be consistent with the County's Zoning Ordinance.
Step 2: Demonstrate Consistency with CAP Measures and Actions (Privately Initiated Project)	
Requirement 1: Electrify Loading Docks. If the project includes cold storage or refrigerated warehouse facilities, it must comply with the County's Code of Regulatory Ordinances as amended to require electric truck loading docks must be equipped with adequate infrastructure to deliver electricity to electric-powered truck refrigeration units (e-TRUs)	Not Applicable. The project would not include cold storage or refrigerated warehouse facilities, and no loading docks would be needed.
Requirement 2: Install Electric Vehicle Charging Infrastructure. The project must comply with the County's Code of Regulatory Ordinances as amended to require (Tier 2) CALGreen or similar electric vehicle charging infrastructure installations and preferential parking for ZEVs for new multifamily residential and nonresidential construction. If the Code of Regulatory Ordinances has not yet been amended, the project shall achieve Tier 2 status as set forth in the 2022 California Green Building Standards Code, Title 24, Part 11 (CALGreen), Appendix A4 Residential Voluntary Measures, Division A4.6, Tier 1 and Tier 2, Section A4.601.5, Tier 2, and Appendix A5 Nonresidential Voluntary Measures, Division A5.6, Voluntary Tiers, Section A5.601.3 CALGreen Tier 2.	Not Applicable. No formal parking spaces would be provided by the project. The project would generally be autonomous during operations, but occasional maintenance workers would utilize on-site unmarked gravel areas for parking. During temporary construction and decommissioning activities, workers would also utilize the on-site unmarked gravel areas for parking. The County has not yet amended the Code of Regulatory Ordinances to require Tier 2 CalGreen electric vehicle parking. According to CALGreen Section A5.106.5.1, projects must designate 50 percent of the total number of parking spaces for of zero-emission, fuel-efficient, or carpool vehicles. Since the total number of parking spaces provided by the project is 0, the project would not be required to designate any zero-emission parking spaces.
Requirement 3: Increase Active Transportation. If both of the following conditions are met, the project must incorporate sidewalk and bikeway improvements from the County's Active Transportation Plan. 1. Intersection or roadway segment improvements are proposed and/or required as part of the project, AND 2. The County's Active Transportation Plan identifies sidewalks or on-road bikeway facilities at intersection(s) or on roadway segment(s) that would be improved as part of the project	Not Applicable. The project would not include any intersection or roadway segment improvements and is therefore not required to provide sidewalk and bikeway improvements.
Requirement 4: Reduce Single Occupancy Vehicle Trips. When the County has adopted the Transportation Demand Management (TDM) ordinance and it has gone into effect, the project must comply with the ordinance.	Not Applicable. The TDM ordinance has not been adopted by the County.
Requirement 5: Electrify Buildings and Appliances. The project must comply with the County's Code of Regulatory Ordinances as amended to incorporate all-electric appliances and equipment in new residential, commercial, and industrial construction or incorporate (Tier 2) CALGreen or similar energy efficiency requirements for existing development projects.	Consistent. All project equipment would be electrified. Electricity for operations associated with the project would be supplied by the San Diego Gas and Electric Company (SDG&E).
Requirement 6: Increase Renewable Energy. The project must comply with the County's Code of Regulatory Ordinances as amended to incorporate (Tier 2) CALGreen or similar renewable energy requirements for new residential and nonresidential construction.	Consistent. The project would construct a 100 MW solar energy generation and storage facility, which would produce renewable solar energy over the project's lifetime. The project would also include 217.4 MW of AC energy storage in the proposed BESS. The power produced by the solar facility would interconnect into the existing SDG&E Boulevard substation via an underground generation-tie line.

CAP Requirement	Project Consistency
Requirement 7: Increase Water Efficiency. The project must comply with the County's Code of Regulatory Ordinances as amended to require (Tier 2) CALGreen or similar water efficiency requirements and reduced outdoor water use for landscaping requirements	Not Applicable. The project would not use any potable water. The project would primarily use water for dust control during construction and for panel cleaning during operations. The project would import non-potable groundwater from the Jacumba Community Services District, delivered by water trucks. None of the fixtures or systems listed in California Green Building Standards Code (CALGreen) Sections A5.303, A5.304, or A5.305 would be included in the project, and thus none of the water use reduction measures would apply to the project.
Requirement 8: Increase Tree Preservation. If the County's program to preserve native trees is in effect, the project must comply	Not Applicable. The County has not yet developed a native tree preservation program. However, to mitigate impacts to biological resources, including native trees, an off-site biological open space easement would be granted over a 448-acre area that includes sensitive vegetation communities, special-status plant species, and habitat for special-status species. This easement is for the protection of biological resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. The biological open space easement would be unfenced.
Requirement 9: Single family residential. The project must comply with the tree planting requirements of the County's Landscaping Ordinance. Each new single family residential project shall include two trees per dwelling unit.	Not Applicable. The project does not propose single-family residential land uses.

In addition to being consistent with the County's 2024 CAP, the project would actively help achieve the CAP's goals related to increased renewable energy generation and would directly implement the County's Renewable Energy Plan, Energy Vision Goal, and Action E-3 of the 2024 CAP, which seek to increase renewable energy use, generation, and storage in unincorporated San Diego County (County of San Diego 2024a). Table 3.1.4-5 summarizes the project's consistencies with the 2024 CAP's vision for net zero emissions.

Table 3.1.4-5. Project Consistency with 2024 CAP Vision for Net Zero Emissions

CAP Goal	Project Consistency
<i>Built Environment and Transportation</i>	
T-1: Reduce fleet and small equipment emissions in County operations	Not Applicable. The project is not a County-initiated project and would not involve County operations.
T-2: Increase the use of low-carbon and zero-emission landscaping and off-road construction equipment in the unincorporated area	Consistent. The project would not require any landscaping equipment. Off-road construction equipment would adhere to the latest standards and regulations.
T-3: Install electric vehicle charging stations and provide incentives for zero-emissions vehicles in the unincorporated area	Not Applicable. No formal parking spaces would be provided by the project. Construction workers and occasional maintenance workers would park on unmarked gravel parking areas. The project would be autonomous, and no persons would be on-site during project operation, except for routine maintenance.
T-4: Reduce emissions from County employee commutes	Not Applicable. The proposed project is not a County-initiated project and would not involve County employees.

CAP Goal	Project Consistency
T-5: Improve County roadways to encourage walking, biking, rolling to/from transit and destinations and increase transportation efficiency	Not Applicable. During operations, the project would be an unoccupied facility that would be monitored remotely. Occasional inspections, washing, and repair and maintenance would occur when necessary and would generate a nominal amount of daily vehicle trips.
T-6: Support transit and transportation demand management to reduce single occupancy vehicle trips in the unincorporated area	Not Applicable. During operations, the project would be an unoccupied facility that would be monitored remotely. Occasional inspections, washing and repair, and maintenance would occur when necessary and would generate a nominal amount of daily vehicle trips.
Energy	
E-1: Develop policies and programs to increase energy efficiency, renewable energy use, and electrification in County Operations	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.
E-2: Develop policies and programs to increase energy efficiency and electrification in the unincorporated area	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.
E-3: Develop policies and programs to increase renewable energy use, generation, and storage in the unincorporated area	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.
E-3.3: Develop a program to provide 100% renewable energy to residents and businesses participating in San Diego Community Power by 2030 in the unincorporated area.	Consistent. The project would increase renewable energy generation and storage in the unincorporated areas of San Diego County.
Solid Waste	
SW-1: Achieve zero waste in County operations	Not Applicable. The project is not a County-initiated project and would not involve County operations.
SW-2: Achieve zero waste within the unincorporated area	Consistent. During construction, solid waste would be appropriately sorted and recycled, when feasible, in accordance with the California Green Building Standards Code (CALGreen) and the County's Construction and Demolition Debris Recycling Ordinance.
SW-3: Improve waste management practices at County-owned solid waste facilities to reduce emissions	Not Applicable. The proposed project is not a County-initiated project and is not a County-owned solid waste facility.
SW-4: Improve waste management practices in the unincorporated area to reduce emissions and increase waste diversion	Consistent. During construction, solid waste would be appropriately sorted and recycled, when feasible, in accordance with CALGreen and the County's Construction and Demolition Debris Recycling Ordinance.
Water and Wastewater	
W-1: Develop policies and programs to increase water efficiency, retention, recycling, and reuse to reduce potable water consumption in County operations	Not Applicable. The project is not a County-initiated project and would not involve County operations.
W-2: Develop policies and programs to increase indoor and outdoor water conservation (including water efficiency, retention, recycling, and reuse) in new and existing development in the unincorporated area	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.
W-3: Develop programs to increase stormwater and wastewater treatment efficiency to reduce imported potable water use in the unincorporated area	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.

CAP Goal	Project Consistency
<i>Agriculture and Conservation</i>	
A-1: Acquire and manage conservation lands to preserve natural lands and maximize carbon storage potential in the unincorporated area	Not Applicable. The project would not involve any agricultural land or agricultural activities. See Section 3.2.1 Agriculture and Forestry Resources.
A-2: Develop a tree planting program that expands canopy across the unincorporated area and prioritizes underserved communities	Not Applicable. The project is not a County-initiated project and would not involve the development of County policies and programs.
A-3: Preserve agricultural lands to prioritize carbon storage and balance economic and development goals	Not Applicable. The project would not involve any agricultural land or agricultural activities. See Section 3.2.1 Agriculture and Forestry Resources.
A-4: Incentivize carbon farming to expand carbon storage capacity on agricultural land and support climate-friendly farming practices in the unincorporated area	Not Applicable. The project would not involve any agricultural land or agricultural activities. See Section 3.2.1 Agriculture and Forestry Resources.
A-5: Reduce greenhouse gas emissions from agricultural operations	Not Applicable. The project would not involve any agricultural land or agricultural activities. See Section 3.2.1 Agriculture and Forestry Resources.

Additionally, CARB’s 2022 Scoping Plan (CARB 2022) provides the framework for how the state will meet its long-term GHG reduction targets pursuant to AB 1279 (i.e., an 85% reduction from a 1990 statewide GHG inventory and carbon neutrality by 2045). Appendix D, Local Actions, of the 2022 Scoping Plan identifies decarbonization as a key priority area for local projects as a measure to demonstrate that they are doing their “fair share” in assisting the state in furthering its long-term GHG reduction targets legislated by AB 1279. While Appendix D is generally considered applicable to residential and mixed-use projects, the direction contained therein can be applied to other project types, such as the proposed project. The project proposes 100 MW of solar photovoltaic panels and 217 MW of battery energy storage systems; the operation of the project would not only bolster the reliability of the electrical grid but would additionally offset the combustion of natural gas and the emissions associated with this action, aligning with the decarbonization goal of the 2022 Scoping Plan. Therefore, the project serves to further reduce natural gas usage and provides the infrastructure for renewable energy resources and would be consistent with the goals of the 2022 Scoping Plan. As the project is a renewable energy project and the emissions associated with it would be minimal, any construction emissions generated by the project would be offset by the fact that the project would provide the community with zero-carbon electricity and would thus further the state in meeting its long-term GHG reduction goals consistent with the County’s 2024 CAP as well as the CARB 2022 Scoping Plan. Therefore, impacts would be **less than significant**.

3.1.4.4 Cumulative Impact Analysis

The analysis of a project’s GHG emissions is inherently a cumulative impacts analysis because climate change is a global issue. Accordingly, the analysis above considers the potential for the project to contribute to the cumulative impact of global climate change. Table 3.1.4-2 shows the estimated annual project-generated GHG emissions as a result of project construction. Given that the project would displace GHG emissions during operations and given that GHG emission impacts are cumulative in nature, the project’s incremental contribution to cumulatively significant GHG emissions would be less than significant. Additionally, the project would be consistent with the CARB 2022 Scoping Plan and the County’s CAP. The project would therefore be consistent with state initiatives aimed at reducing GHG emissions and would **not contribute to a cumulatively considerable impact**.

3.1.4.5 Conclusion

Indirect and Direct GHG emissions

The project would generate approximately 3,158 MT CO₂e during the 18-month construction period, or 105 MT CO₂e per year amortized over an expected project lifetime of 30 years. As previously discussed, the project would be an unoccupied facility that would be monitored remotely during operations. As a part of routine maintenance, the PV panels would only be washed once per year. Occasional inspections and repairs would only occur when necessary. Therefore, emissions during operations would be minimal as the project would be remotely operated and would generate a nominal amount of annual vehicle trips. Activities associated with decommissioning of the project would be similar to those required for project construction. Therefore, it is conservatively estimated that future decommissioning of the project would similarly generate a total of 3,158 MT CO₂e, or 105 MT CO₂e per year amortized over an expected project lifetime of 30 years. Further, implementation of the project would result in 1,400 MT CO₂e per year in indirect emissions due to the reduction of the carbon sequestration capacity of the project site. In total, the project would result in approximately 1,611 MT per year of combined direct and indirect CO₂e emissions.

However, 29,700 MT per year of carbon emissions would be avoided by the output of carbon-free electric power produced by the project. The project's annual indirect GHG emissions from the displacement of fossil fuel-fired electricity generation is significantly higher than the project's annualized direct and indirect emissions sources; as such, the overall effect of the project would reduce GHG emissions. Therefore, the project would have a beneficial GHG emissions impact, and impacts would be **less than significant**, and no mitigation measures would be necessary.

Conflict with Adopted Plans

The project would help promote California's GHG policies by creating renewable energy resources and would be consistent with the CARB 2022 Scoping Plan. Further, as shown in Table 3.1.4-4 and Table 3.1.4-5, the project would be consistent with the County's 2024 CAP. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. Therefore, impacts would be **less than significant**, and no mitigation measures would be necessary.

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