3.1.2 Energy

This section of the Environmental Impact Report (EIR) discusses potential impacts related to energy use resulting from the implementation of the proposed 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 for Climate Change* (County of San Diego 2024b):

- *Starlight Solar Air Quality and Greenhouse Gas Technical Study* (Yorke Engineering, LLC 2024a) (Appendix H.1 of this EIR)
- *2024 Climate Action Plan Consistency Review Checklist for Starlight Solar* (SWCA Environmental Consultants [SWCA] 2025) (Appendix H.3 of this EIR)

Comments received in response to the Notice of Preparation (NOP) include concerns regarding energy use during construction, and potential energy waste if generation is curtailed. 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.

3.1.2.1 Existing Conditions

Energy is primarily categorized into three areas: electricity, natural gas, and transportation fuels. According to the U.S. Energy Information Administration (U.S. EIA), California is the most populous state in the United States, representing 12% of the total national population; has the largest economy; and is second only to Texas in total energy consumption. However, California has one of the lowest per capita energy consumption levels in the United States, a result of California's mild climate, efforts to increase energy efficiency, and implementation of alternative technologies (U.S. EIA 2022).

Units of Measure

The units of energy used in this section are British thermal units (BTU), kilowatt hours (kWh), therms, and gallons. A BTU is the quantity of heat required to raise the temperature of one pound of water 1 degree Fahrenheit (°F) at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and 1 kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; 1 cubic foot of natural gas is equivalent to approximately 1,050 BTU, and 1 therm represents 100,000 BTU. One gallon of gasoline/diesel is equivalent to approximately 125,000/139,000 BTU, respectively, taking into account energy consumed in the refining process.

Environmental Setting

The environmental setting for the project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed below. In summary, in 2022 (the latest calendar year for which data is uniformly available for all three types of energy sources), California's estimated annual energy use included the following:

- Approximately 287,220 gigawatt hours of electricity (California Energy Commission [CEC] 2022a)
- Approximately 2,130 trillion BTU of natural gas (U.S. EIA 2022)

- Approximately 1,479 trillion BTU of gasoline (U.S. EIA 2022)

Electricity

In 2020 the California electric system used 279,510 gigawatt hours (GWh) of electricity (CEC 2022a). San Diego County consumed 19,045 GWh of electricity, approximately 7% of the state's electricity consumption in 2020 (CEC 2022b). The County of San Diego (County) is dedicated to using renewable sources whenever possible and currently generates almost 19,620,591 kWh annually, or 22.56% of the County's annual energy usage (County of San Diego 2022).

The project is within the San Diego Gas and Electric Company (SDG&E) service area. SDG&E provides electricity for residential, commercial, and industrial markets. Estimated annual SDG&E electricity data consumed by customers in 2020 was approximately 17,445 million kWh.

Natural Gas

SDG&E provides natural gas for residential, commercial, and industrial markets throughout San Diego County. In 2022 California consumed about 11,711 million therms of natural gas. San Diego County consumed approximately 522 million therms of natural gas in the same year, accounting for approximately 5% of statewide consumption (CEC 2022c).

Transportation

As of 2015, there are approximately 30 million registered vehicles in California (California Department of Motor Vehicles 2024). Gasoline and other vehicle fuels, including electricity and natural gas, are commercially provided commodities and would be available to the project through commercial outlets. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible. As a result of and in response to these factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels and energy sources have increased (CEC 2022b). Increasingly available and diversified transportation energy resources promote continuing reliable and affordable means to support vehicular transportation within the state. Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB).

According to the California Department of Tax and Fee Administration (CDTFA), statewide taxable sales figures indicate a total of 13.8 billion gallons of gasoline were sold in 2021 and 3.1 billion gallons of diesel fuel were sold in 2019 (CDTFA 2022).

As of September 23, 2020, Governor Gavin Newsom signed Executive Order (EO) N-79-20, which requires that by 2035, all new cars and passenger trucks sold in California be zero-emission vehicles (California Office of the Governor 2020). Following the order, the CARB will develop regulations to mandate that 100% of in-state sales of new passenger cars and trucks are zero-emission by 2035—a target that would achieve more than a 35% reduction in GHG emissions and an 80% improvement in nitrogen oxide emissions from cars statewide. In addition, the CARB will develop regulations to mandate that all operations of medium- and heavy-duty vehicles shall be 100% zero-emission by 2045 where feasible, with the mandate going into effect by 2035 for drayage trucks.

3.1.2.2 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, U.S. Department of Energy, and U.S. Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the California Public Utilities Commission (CPUC) and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below. On the local level, the County has established three long-range planning documents that encourage the use of alternative energy technologies to meet climate planning goals.

Federal Regulations

Federal Energy Policy and Conservation Act

In 1975 Congress enacted the Federal Energy and Policy Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the act also includes the following provisions related to energy efficiency:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022
2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and directs the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks
3. 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

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum. The EPA is responsible for developing and implementing regulations to ensure transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel produces, and other stakeholders.

NHTSA Corporate Average Fuel Economy

The NHTSA's CAFE standards regulate how far vehicles must travel on 1 gallon of fuel. The NHTSA sets CAFE standards for passenger cars and for light trucks (collectively, light-duty vehicles), and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines. The NHTSA also regulates the fuel economy window stickers on new vehicles The final rule establishes standards that would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8% annually for model years 2024 and 2025 and 10% annually for model year 2026 (NHTSA 2024).

State Regulations

California Code of Regulations Title 24, Part 6

The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. California's Building Energy Efficiency Standards are updated on an approximately 3-year cycle. The 2019 standards, adopted on May 9, 2018, went into effect on January 1, 2020, and improve upon existing standards, focusing on three key areas: (1) proposing new requirements for installation of solar photovoltaics for newly constructed low-rise residential buildings, (2) updating current ventilation and Indoor Air Quality requirements, and (3) extending California Code of Regulations Title 24, Part 6 to apply to healthcare facilities. The 2019 standards also include several smaller improvements in energy efficiency.

Senate Bill 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California Senate Bill (SB) 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce GHG emissions and other air pollutants. SB 375 tasks the CARB to set GHG reduction targets for each of California's 18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies, including, for example, RFS, appliance and lighting efficiency standards, and building energy efficiency.

Pursuant to California Government Code Section 65080(b)(2)(K), an SCS does not (i) regulate the use of land, (ii) supersede the land use authority of cities and counties, or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010 the CARB adopted SB 375 targets for the regional MPOs. The targets for the San Diego Association of Governments (SANDAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SANDAG completed and adopted its 2050 RTP/SCS in October 2011. In November 2011, the CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve the CARB's 2020 and 2035 GHG emissions reduction targets for the region. After SANDAG's 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. In July 2017, the California Supreme Court held that SANDAG's EIR did not have to use EO S-3-05's 2050 goal of an 80% reduction in GHG emissions from 1990 levels as a threshold because the EIR sufficiently informed the public of the potential impacts.

Although the EIR for SANDAG's 2050 RTP/SCS was pending before the California Supreme Court, in 2015, SANDAG adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines, and no subsequent litigation challenge was filed. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets the CARB's 2020 and 2035 reduction targets for the region (SANDAG 2025). In December 2015, the CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that,

if implemented, the SCS would achieve the CARB's 2020 and 2035 GHG emissions reduction targets for the region.

State of California Energy Action Plan

The CEC and CPUC approved the first *State of California Energy Action Plan* in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided, and identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. In 2005 a second energy action plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the prior 2 years. At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

California Air Resources Board

Over the past 15 years, California has set numerous GHG emission reduction goals (discussed in Section 3.1.4, Greenhouse Gas Emissions). The CARB has implemented numerous GHG regulations with regard to limiting vehicle emissions, which also tend to limit energy use. These include:

- **Statewide Portable Equipment Registration Program (PERP).** This is a voluntary statewide registration program to register portable equipment such as air compressors, generators, concrete pumps, etc. PERP-registered equipment may operate throughout the state without obtaining permits from any of California's 35 air quality management or air pollution control districts. Registration requires that engines meet specific emission standards (CARB 2024a).
- **In-Use Off-Road Diesel-Fueled Fleets Regulation (DOORS on-line reporting system).** The In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all self-propelled off-road diesel vehicles, 25 horsepower (hp) or greater, used in California and most two-engine vehicles. This regulation imposes limits on idling, requires a written idling policy, and restricts adding older, less energy efficient, vehicles to fleets. It requires fleets to use only vehicles with Tier3 or Tier 4 engines, which reduce emissions and increase energy efficiency (CARB 2024b).

Local Regulations

San Diego County Air Pollution Control District

The San Diego County Air Pollution Control District (SDAPCD) is a 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.

The SDAPCD has a registration program for portable equipment (District Rule 12.1). The SDAPCD's local registration program was established under District Rule 12.1 and provides a mechanism to allow owners and operators of portable engines and portable equipment units to operate in San Diego County in lieu of obtaining a local Permit to Operate. Portable engines rated at 50 hp or greater and portable equipment units that are not exempt from permitting requirements in accordance with District Rule 11 must obtain a permit either from the state or SDAPCD. Registration requires that engines meet specific emission standards (SDAPCD 2024).

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 VMT; 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 Conservation and Open Space Element of the General Plan (County of San Diego 2011b) also includes goals and policies that are designed to reduce GHGs emissions by enhancing the efficiency of energy use in buildings and infrastructure and promoting the use of renewable energy sources and conservation, and other methods of efficiency. The following goals and policies are applicable to the proposed project:

- **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 non-renewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities.
    - **COS-18.1: Alternate Energy Systems Design.** Work with San Diego Gas and Electric and non-utility developers to facilitate the development of alternative energy systems that are located and designed to maintain the character of their setting.
- **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.

The project's consistency with applicable General Plan policies is evaluated in Section 3.1.6, Land Use and Planning, of this EIR.

San Diego County 2024 Climate Action Plan

The County has developed the *Final 2024 Climate Action Plan* (2024 CAP) (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 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 a CAP Consistency Review Checklist (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 project's 2024 CAP Consistency Checklist.

San Diego County Decarbonization Framework

The San Diego Regional Decarbonization Framework is the County's science-based, holistic approach to guide the region's decarbonization efforts in partnership with the University of California, San Diego School of Global Policy and Strategy and the University of San Diego Energy Policy Initiatives Center and Inclusive Economics.

Recognizing the need for a regional approach to addressing climate change, on January 27, 2021, the County Board of Supervisors voted to create a Regional Decarbonization Framework (County of San Diego 2021). This framework is intended to inform their collective future actions on reducing GHG emissions in the San Diego region. It is intended to supplement climate action planning efforts that are currently underway and chart collaborative pathways to implement their regional goals.

SDG&E's Current Long-Term Procurement Plan

The service area energy and peak demand forecasts used in SDG&E's long-term procurement plan (SDG&E 2024) reflect the CEC's final 2007 Integrated Energy Policy Report forecast and the underlying assumptions (e.g., self-served load, capacity from the California Solar Initiative, energy efficiency) are equivalent to those used in the adopted CEC forecast. According to the CEC's forecast, load growth is forecasted to grow at approximately 1% annually after energy efficiency and self-served load. The CEC's forecast is then split between bundled load and direct access load. SDG&E's forecasted bundled load percentage is based on 2008 Local Capacity Requirement.

SANDAG Regional Energy Strategy

SANDAG's *Regional Energy Strategy Update* (SANDAG 2014) serves as the energy policy blueprint for the San Diego region through 2050 and identifies the following priority early implementation actions, essential to meeting the region's energy goals:

- Pursue a comprehensive building retrofit program to improve efficiency and install renewable energy systems;
- Create financing programs to pay for projects and improvements that save energy;
- Utilize the SANDAG-SDG&E Local Government Partnership to help local governments identify opportunities and implement energy savings at government facilities and throughout their communities;
- Support land use and transportation planning strategies that reduce energy use and GHG emissions;
- Support planning of electric charging and alternative fueling infrastructure; and
- Support the use of existing unused reclaimed water to decrease the amount of energy needed to meet the water needs of the San Diego region.

The *Regional Strategy Energy Update* identifies the main strategy drivers, including the state's preferred loading order for meeting new energy needs and global climate change and its policy implications. The CPUC and CEC adopted a preferred loading order to meet the goals for satisfying the state's growing demand for electricity, which would place top priority on increasing energy efficiency and demand response (i.e., temporary reduction or shift in energy use during peak hours), generating new energy from renewable and distributed generation resources, and improvements to clean fossil-fueled generation and infrastructure. Environmental changes caused by climate change are anticipated to have an increasing impact on energy production and peak demand for electricity.

San Diego County Renewable Energy Plan

The *County of San Diego Renewable Energy Plan* (County of San Diego 2019) researches and develops 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. One of the goals of the renewable energy plan is to increase the use of grid-supplied energy sourced from renewable power (County of San Diego 2019).

Mountain Empire Subregional Plan

The project site is located within the Mountain Empire Subregion in the Boulevard Subregional Planning Area boundary. The following goals and policies in the *Boulevard Subregional Planning Area, Mountain Empire Subregional Plan* (County of San Diego 2013) are relevant to energy:

- **GOAL CM 8.6:** Local residential scale renewable energy projects that are technically feasible and environmentally sensitive
    - **Policy 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.
    - **Policy CM 8.6.2:** Encourage the use of solar and residential scale wind turbines.

3.1.2.3 Analysis of Project Effects and Determination as to Significance

Guidelines for the Determination of Significance

The County's guidelines for determining significance do not explicitly address energy. Therefore, for the purposes of this EIR, the determinations of significance of project impacts are based on the State CEQA Guidelines, Appendix G Issues VI.a and VI.b and other applicable policies, and regulations. This applies to both the direct impact analysis and the cumulative impact analysis. A significant impact would result if the project

- Results in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflicts with or obstruct a state or local plan for renewable energy or energy efficiency.

To ensure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the State CEQA Guidelines was used to identify the potential energy implications of the project. The following list of energy impact possibilities and potential conservation measures are analyzed below:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on regional and local energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Consumption of Energy Resources, During Project Construction or Operation

Guidelines for the Determination of Significance

The project would be considered to have a significant effect on energy if the effects

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Analysis

Construction

Energy use during construction typically involves the use of motor vehicles for transportation of workers and materials, motorized equipment for direct construction actions, and temporary electric power. Natural gas would not be required during construction of the project. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction and decommissioning activities (7 a.m. to 7 p.m.).

The majority of the energy used during construction would be from petroleum to power vehicles and motorized equipment. Construction activities would require the use of diesel fuel, gasoline, and other fuels. Standard construction equipment would be used during construction, including earthmoving equipment (e.g., bulldozers, excavators, backhoes) and road-building equipment (e.g., compactors, scrapers, graders). Construction equipment would include air compressors, all-terrain passenger vehicles, backhoes, cranes, a drill rig, flat-bed trucks, a front-end loader, pick-up trucks, a pile driver, a trencher, and water trucks. Heavy-duty construction equipment would rely on diesel fuel. It is anticipated that construction workers would travel up to 60 miles per trip to and from the project and rely on gasoline-powered vehicles. Since the use of gasoline and diesel fuel would be a significant portion of construction costs, contractors would minimize the use of fuel within the constraints of project requirements. Cut and fill would be balanced on-site, minimizing haul truck trips and associated fuel consumption. Due to the short-term nature of the construction activities and the total amount of diesel and gasoline fuel anticipated to be consumed, the project's consumption of energy (primarily diesel fuel) during construction would not represent a substantial demand on energy resources or result in the need to develop any new, or alter any existing, energy production or distribution facilities. Consuming energy to construct a renewable energy project to reduce the state's GHG emissions from energy is not wasteful, inefficient, or unnecessary.

Therefore, construction-related energy would not be used in a wasteful, inefficient, or unnecessary manner and impacts related to energy use would be **less than significant**.

Operation

The project would construct a solar energy generation and storage facility, which would produce renewable solar energy over the project's lifetime. The project would produce up to approximately 100 megawatts (MW) of solar energy and would include 217.4 MW of alternating current (AC) energy storage in the proposed battery energy storage system (BESS). The power produced by the solar facility would interconnect into Boulevard substation via an underground generation-tie line. The project would generate more energy than it would use during operation. Electricity for operations associated with the project would be supplied by SDG&E. During operation, the project would have motion-detection security lighting at entrances. Energy would be used for remote monitoring, periodic maintenance, washing of solar panels (anticipated to be once per year), inspection, and repair activities when needed. Maintenance trucks would be utilized to perform routine maintenance, including, but not limited to, equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance. These activities would require the use of petroleum.

The project would not be expected to have any significant effect on regional or local energy supplies and would not adversely affect peak and base period demands for electricity or other forms of energy. The project would generate more energy than it would demand, and would provide an alternative to fossil fuel generation of electric power. Therefore, the project's generation of renewable energy would far exceed the project's electricity demand and would not result in a wasteful or unnecessary use of electricity, and impacts would be **less than significant**.

Conflict with a State or Local Plan

Guidelines for the Determination of Significance

The project would be considered to have a significant effect on energy if the effects

- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Analysis

The project would adhere to all energy efficiency requirements during construction, including registration requirements of the CARB and SDAPCD, idling requirements, and engine efficiency requirements, as required by law.

The project would also be consistent with the 2024 CAP and would help the County achieve the CAP's goals related to increased renewable energy generation (see Appendix H.3). The project directly implements the County's Renewable Energy Plan, Energy Vision Goal, and Action E-3 of the 2024 CAP, which seeks to increase renewable energy use, generation, and storage in unincorporated areas of San Diego County (County of San Diego 2024a). The County's 2015–2020 Strategic Energy Plan included energy efficiency standards for new development, renewable energy generation, water conservation measures, transportation measures to reduce trips and VMT, and waste diversion programs (County of San Diego 2015). This plan serves as a companion document to the County's General Plan and provides the framework for land-based policy decisions to improve energy efficiency in existing and future development. While many of the regulations regarding energy efficiency, such as those associated with increasing building efficiency are not relevant to the project, the project is consistent with the goal of increasing renewable energy generation. As the project would increase the availability of renewable energy and comply with all requirements during construction, **no impact** would occur.

3.1.2.4 Cumulative Impact Analysis

Cumulative, Consumption of Energy Resources

Potential cumulative impacts on energy would result if the project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction, decommissioning, and/or operation. Projects that would mostly include construction, such as transportation infrastructure or renewable energy projects, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would not typically involve substantial ongoing energy use. Other large renewable energy generation projects would result in an increase in regional renewable energy supply (see Figure 1-13 and Table 1-4, in Chapter 1.0, Project Description, Location, and Environmental Setting, of this EIR). Therefore, the project would have a **less than cumulatively considerable** impact to the wasteful or inefficient use of energy.

Cumulative, Conflicts with a State or Local Plan

As described in Section 3.1.2.3, Analysis of Project Effects and Determination as to Significance, the project would not result in wasteful, inefficient, or unnecessary use of energy given the project's minimal energy use and large-scale production of renewable energy.

Given the project would generate renewable energy over its lifetime, the project would not contribute to a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. This includes substantial demand on energy resources or services such that new regional energy facilities would be required to be constructed as a result of the incremental increase in energy demand resulting from the project. The project would also be consistent with the 2024 CAP and would help achieve the County's goals related to increased renewable energy generation (see Appendix H.3). Furthermore, the project would generate additional renewable energy itself, reducing the need for non-renewable energy-generating facilities and increasing the amount of clean energy available to consumers in the region. Therefore, the project would have **a less than cumulatively considerable** impact with respect to significant cumulative impacts related to the wasteful or inefficient use of energy.

3.1.2.5 Conclusion

Consumption of Energy Resources, During Project Construction or Operation

Due to the short-term nature of the construction activities and the total amount of diesel and gasoline fuel anticipated to be consumed, the project's consumption of energy during construction would not represent a substantial demand on energy resources or result in the need to develop any new, or alter any existing, energy production or distribution facilities. During operations, the project would produce up to approximately 100 MW of solar energy and would include 217.4 MW of AC energy storage in the proposed BESS. The project would generate more energy than it would demand, would not be expected to have any significant effect on regional or local energy supplies, and would not adversely affect peak and base period demands for electricity or other forms of energy. Therefore, energy use during project construction and operational would not be used in a wasteful, inefficient, or unnecessary manner and impacts would be **less than significant**.

Conflict with a State or Local Plan

The project would produce renewable solar energy over the project's lifetime and would be consistent with the General Plan goal of increasing renewable energy generation. Additionally, the project would be consistent with the 2024 CAP (see Appendix H.3). Therefore, the project would result in a **less than significant** impact.

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