3.1.2 Energy

This section analyzes the energy impacts of the Campo Wind Project with Boulder Brush Facilities (Project). Specifically, this section summarizes the existing conditions in the Project Area and Project Vicinity; discusses the regulatory framework; and discloses estimated energy use during construction, decommissioning, and operation of the Project. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demands of the Project, as well as potential service delivery impacts.

Comments received in response to the Notice of Preparation included concerns regarding electrical pollution, energy consumption and the demand of "green energy." These concerns were considered in the preparation of this section. A copy of the Notice of Preparation and comment letters received in response to the Notice of Preparation are included in Appendix A of this Environmental Impact Report (EIR).

Information in this section is based on the Project's Air Quality and Greenhouse Gas Technical Report (2019), prepared by Dudek (Appendix C to this EIR).

3.1.2.1 Existing Conditions

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 2016 (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 282,896 gigawatt hours of electricity (EIA 2017a)
- Approximately 23 billion therms of natural gas (approximately 6.4 billion cubic feet of natural gas per day) (EIA 2017b)
- Approximately 16 billion gallons of gasoline (CARB 2018)

Electricity

Electricity usage in California for different land uses varies substantially by the types of uses in a building, types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita has remained stable for more than 30 years, while the national average has steadily increased (CEC 2015a).

San Diego Gas & Electric (SDG&E) provides electric services to 3.6 million customers through 1.4 million electric meters located in a 4,100-square-mile service area that includes San Diego County and southern Orange County (SDG&E 2018a). SDG&E is a subsidiary of Sempra Energy and would provide electricity to the Project. According to the California Public Utilities Commission (CPUC), SDG&E customers consumed approximately 19,169 million kilowatt-hours (kWh) of electricity in 2015 (CPUC 2016).

SDG&E receives electric power from a variety of sources. In 2016, 43% of SDG&E's power came from eligible renewable energy sources, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources. This is an improvement of 11% renewable energy use over what SDG&E maintained in 2014 (CPUC 2016, 2018).

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 890 megawatts per year for the next decade, or 1.4% annually, and consumption per capita is expected to remain relatively constant at 7,200 to 7,800 kWh per person (CEC 2015a).

In San Diego County, the California Energy Commission (CEC) reported an annual electrical consumption of approximately 6,883 million kWh in 2015 for residential use (CEC 2017).

Natural Gas

The CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Pacific Gas & Electric Company (PG&E), Southern California Gas (SoCalGas), SDG&E, Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage (CPUC 2017). SDG&E provides natural gas service to San Diego and Orange Counties. SDG&E is a wholesale customer of SoCalGas, and currently receives all of its natural gas from the SoCalGas system (CPUC 2017).

The CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2017).

In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California (CPUC 2017). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern

River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and the CPUC often participates in Federal Energy Regulatory Commission proceedings to represent the interests of California natural gas consumers (CPUC 2017).

Most of the natural gas transported through interstate pipelines, and some California-produced natural gas, is delivered through the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large, noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the natural gas delivered to California's gas consumers in 2012 (CPUC 2017).

PG&E and SoCalGas own and operate several natural gas storage fields that are located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2017).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, the CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017).

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources, and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

There are more than 35 million registered vehicles in California, and those vehicles consume an estimated 18 billion gallons of fuel each year (CEC 2017; DMV 2017). Gasoline and other vehicle fuels are commercially provided commodities and would be available to the Project through commercial outlets.

Petroleum currently accounts for approximately 92% of California's transportation energy consumption (CEC 2017). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. 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.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels and energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend may likely continue and accelerate (CEC 2017). Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

Existing Infrastructure

The Project Site is within the SDG&E service area. The 2,000-acre Boulder Brush Boundary currently consists of largely undeveloped land, a portion of which was historically grazed by cattle. The 500-kilovolt Sunrise Powerlink traverses the northeast portion of the Boulder Brush Boundary. The 16,000-acre Campo Band of Diegueño Mission Indians Reservation (Reservation) includes rural residential, wind energy facilities, the Golden Acorn Casino, Tribal facilities, and Campo Materials aggregate activities. The Reservation Boundary is surrounded by open space and rural residential developments in unincorporated communities.

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, 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, CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

Federal

Federal regulations are applicable to the Boulder Brush Facilities and to the Campo Wind Facilities.

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and 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 is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

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

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2013, 2015). The EPA is responsible for developing and implementing regulations to ensure that 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 producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the Energy Policy Act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel, and set separate volume requirements for each one.
- EISA required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

State

The discussion below focuses primarily on those policies, regulations, and laws that directly pertain to energy-related resources. Refer to Section 3.1.4, Greenhouse Gas Emissions, of this EIR, which addresses various policies, regulations, and laws targeted to the reduction of GHG emissions that are expected to achieve co-benefits in the form of reduced demand for energy-related resources and enhanced efficiencies in the consumption of energy-related resources.

State regulations are applicable to the Boulder Bush Facilities, which are proposed on private lands under the jurisdiction of the County of San Diego (County). State regulations are not applicable to the Campo Wind Facilities or the Reservation.

Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974. The Warren-Alquist Act created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

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, 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 (discussed below). Rather than produce a new energy action plan, CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

Senate Bill (SB) 1078 established the California Renewables Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. SB 1078 relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid, and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 3.1.4 of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduced energy used in the state. In general, single-family homes built to the 2016 standards are anticipated to use approximately 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and non-residential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2015b). The 2016 Title 24

standards are the current applicable building energy efficiency standards, and became effective on January 1, 2017. The 2019 standards will continue to improve upon the 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 Title 24 standards will become effective on January 1, 2020. In general, single-family homes built with the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards. For those built with rooftop solar electricity generation, homes built under the 2019 standards are anticipated to use approximately 53% less energy than those built to the 2016 standards. Nonresidential buildings are anticipated to use approximately 30% less energy than those built to the 2016 standards, due mainly to lighting upgrades (CEC 2018).

Title 24 also includes Part 11, California's Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2016 CALGreen standards became effective on January 1, 2017. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use
- 50% diversion of construction and demolition waste from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency

Similar to Title 24, Part 6, the proposed 2019 CALGreen standards will build upon the 2016 CALGreen standards for residential and non-residential construction, and will go into effect on January 1, 2020.

Integrated Energy Policy Report

The CEC is responsible for preparing integrated energy policy reports that identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The CEC's 2015 Integrated Energy Policy Report discusses the state's policy goal to require that new residential construction be designed to achieve zero net energy standards by 2020, and that new non-residential construction be designed to achieve zero net energy standards by 2030 (CEC 2016a), which is relevant to this EIR. Refer to Section 3.1.4 of this EIR for additional information on the state's zero net energy objectives and how the state's achievement of its objectives would serve to beneficially reduce the Project's GHG emissions profile and energy consumption.

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emissions standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emissions standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% of GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of zero-emissions vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles will emit 34% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

California EO N-79-20

Executive Order N-79-20 establishes a new statewide goal that 100% of in-state sales of new passenger cars and trucks will be zero-emission by 2035. It establishes a further statewide goal that 100% of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks. It also establishes a statewide goal to transition to 100% zero-emission off-road vehicles and equipment by 2035 where feasible.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations (e.g., San Diego Association of Governments) to include a Sustainable Communities Strategy in their regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and VMT, which influence the consumption of petroleum-based fuels.

Local

Local regulations are applicable to the Boulder Bush Facilities, which are proposed on private lands under the jurisdiction of the County. Local regulations are not applicable to the Campo Wind Facilities or the Reservation.

SDG&E Individual Integrated Resource Plan

SDG&E's Conforming Portfolio identifies a need for approximately 700 gigawatt-hours of incremental renewable power, in addition to the assumed increases in energy efficiency and behind-the-meter solar, to meet the 2030 planning target (approximately 4% of the total energy in the portfolio) (SDG&E 2018b). SDG&E's Conforming Portfolio demonstrates that SDG&E has reduced its GHG emissions in the early years of the planning period, reflecting SDG&E's current position in relation to its RPS targets, with approximately 45% of its current energy mix coming from delivering renewable resources in 2018 compared to an RPS requirement of 29%, due to its aggressive adoption of energy storage and no coal resources. SDG&E is fully compliant with RPS and long-term contracting requirements. SDG&E continues to meet resource-specific renewable procurement mandates, as required, but does not expect to procure additional resources for RPS compliance purposes until after 2030. SDG&E is forecasted to reach 49% renewable energy in 2021, 98% of which will be from long-term contracts.

County of San Diego General Plan

The County of San Diego General Plan takes steps to address energy by including policies for improving energy efficiency, reducing waste, improving 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. The following policies identified in the General Plan's Conservation and Open Space Element are applicable to the Boulder Brush Facilities (County of San Diego 2011a):

- ***Policy 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.
- ***Policy COS-14.2: Villages and Rural Villages.*** Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.
- ***Policy 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.
- ***Policy COS-14.5: Building Siting and Orientation in Subdivisions.*** Require that buildings be located and oriented in new subdivisions and multi-structure non-residential projects to

maximize passive solar heating during cool seasons, minimize heat gains during hot periods, enhance natural ventilation, and promote the effective use of daylight.

- ***Policy COS-14.7: Alternative Energy Sources for Development Projects.*** Encourage development projects that use energy recovery, photovoltaic, and wind energy.
- ***Policy 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.
- ***Policy COS-16.2: Single-Occupancy Vehicles.*** Support transportation management programs that reduce the use of single-occupancy vehicles.
- ***Policy COS-17.2: Construction and Demolition Waste.*** Require recycling, reduction and reuse of construction and demolition debris.
- ***Policy 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.
- ***Policy COS-18.3: Alternate Energy Systems Impacts.*** Require alternative energy system operators to properly design and maintain these systems to minimize adverse impacts to the environment.
- ***Policy COS-19.1: Sustainable Development Practices.*** Require land development, building design, landscaping, and operational practices that minimize water consumption.

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

Mountain Empire Subregional Plan

The Mountain Empire Subregional Plan (a supplement to the County General Plan) establishes goals and policies to guide development within the areas of Tecate, Potrero, Boulevard, Campo/Lake Morena, Jacumba, and the Mountain Empire Balance (including the community of Tierra del Sol), which together comprise the Mountain Empire Subregion of southeastern San Diego County. The goals and policies of the Mountain Empire Subregional Plan are intended to be more specific than those of the County General Plan, and they consider the distinct history, character, and identity of Mountain Empire communities. The Mountain Empire Subregional Plan contains nine elements: community character, land use, housing, mobility, public facilities and services, conservation, recreation, energy conservation, and scenic highways. The following goals, policies, and recommendations of the Mountain Empire Subregional Plan are applicable to the Boulder Brush Facilities (County of San Diego 2016):

Energy Conservation Goal. Ensure the conservation of non-renewable energy resources is pursued in a way that is not detrimental to the rural lifestyle.

- ***Policy and Recommendation 1.*** New development should utilize alternative energy technologies, especially active and passive solar energy systems.

Boulevard Subregional Planning Area Community Plan

The Boulevard Subregional Planning Area Community Plan (Boulevard Community Plan) is a part of the Mountain Empire Subregional Plan that focuses specifically on the rural communities of Boulevard, Manzanita, Live Oak Springs, Tierra Del Sol, and a few other small towns in southeastern San Diego County. The Boulevard Community Plan establishes goals and policies to help guide development within the planning area. The goals and policies of the Boulevard Community Plan are more specific than both the County's General Plan and the Mountain Empire Subregional Plan, and they consider the distinct history, character, and identity of the communities within the planning area. The Boulevard Community Plan contains five elements: land use, circulation and mobility, conservation and open space, safety, and noise. The Land Use Element of the Boulevard Community Plan guides the application of County-wide land use designations, goals, and policies to reflect the distinguishing characteristics and objectives for the community.

The following policies of the Boulevard Community Plan Land Use Element are applicable to the Boulder Brush Facilities (County of San Diego 2011b):

- ***Policy LU 1.2.1:*** Encourage and promote local and on-site energy conservation, residential-scale renewable energy production, and zero waste recycling goals that will help reduce the need for large scale energy generation projects and facilities.
- ***Policy LU 6.1.1:*** Require commercial, industrial development and large scale energy generation projects to mitigate adverse impacts to the rural community character, charm, quiet ambiance and life-style, or the natural resources, wildlife, and dark skies of Boulevard, if feasible, in accordance with the California Environmental Quality Act.
- ***Policy LU 6.1.2:*** Encourage commercial, industrial development and large scale energy generation projects to create and maintain adequate buffers between residential areas and incompatible activities that create heavy traffic, noise, infrasonic vibrations, lighting, odors, dust and unsightly views and impacts to groundwater quality and quantity.
- ***Policy LU 6.1.3:*** Encourage commercial, industrial development and large scale energy generation projects to provide buffers from public roads, adjacent and surrounding properties and residences, recreational areas, and trails.

Climate Action Plan

The County developed a Climate Action Plan that is a comprehensive strategy to reduce GHG emissions in the unincorporated communities of the County. The Climate Action Plan includes two strategies and five measures to reduce energy consumption and increase renewable energy generation (County of San Diego 2018). As outlined in Chapter 3.1.4 of this Final EIR, while the

County Board of Supervisors rescinded the CAP, the Board provided direction to continue to implement GHG reduction measures and to work on fixing the CAP EIR and bring back a corrected CAP for adoption:

Strategy E-1: Increase Building Energy Efficiency

- **Measure E-1.2:** Use Alternatively-powered Water Heaters in Residential Development
- **Measure E-1.4:** Reduce Energy Use Intensity at County Facilities

Strategy E-2: Increase Renewable Electricity Use

- **Measure E-2.1:** Increase Renewable Electricity
- **Measure E-2.3:** Install Solar Photovoltaics in Existing Homes
- **Measure E-2.4:** Increase Use of On-Site Renewable Electricity Generation for County Operations

These five measures together represent 31% of the GHG reduction in the Climate Action Plan (County of San Diego 2018).

Renewable Energy Plan

The County's Renewable Energy Plan researches and develops renewable energy options in the County. The planning effort covers the residential, commercial, and industrial sectors of the County, with a particular focus on unincorporated areas, and presents a comprehensive approach to renewable energy and energy efficiency (County of San Diego 2017).

Tribal

Tribal Implementation Plan

In the 1990 revision of the Clean Air Act, Congress recognized that Native American tribes have the authority to implement air pollution control programs. The EPA's Tribal Authority Rule gives tribes the ability to develop air quality management programs, write rules to reduce air pollution, and implement and enforce their rules within tribal lands. State and local agencies are responsible for all Clean Air Act requirements, and tribes may develop and implement only those parts of the Clean Air Act that are appropriate for their lands. The EPA provides technical assistance and resources to help tribes build their program capacity. The EPA also implements the Clean Air Act requirements on tribal lands through programs such as the Federal Rules for Reservations, Title V permits, and air toxics rules.

Initially, the General Conformity Rule of 1993 did not specifically identify the roles of Native American tribes in the General Conformity Rule process or the connection between the regulations and Tribal Implementation Plans. In the revised 2011 General Conformity Rule regulations, the EPA specifically identified tribal agencies as stakeholders in the conformity process to ensure that in a nonattainment or maintenance area, federal actions conform to the air quality plans established in the applicable State Implementation Plan or Tribal Implementation Plan, such as requiring specific notification for any federally recognized tribes in the nonattainment or maintenance area where the action is occurring. In addition, the revised regulations also clarify that federal actions must conform to any applicable Tribal Implementation Plan.

The General Conformity Rule plays an important role in helping tribes improve air quality in those areas that do not meet National Ambient Air Quality Standards. Under the General Conformity Rule, federal agencies must work with state, tribal, and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plan established in the applicable State Implementation Plan or Tribal Implementation Plan.

The Reservation is in attainment for all criteria pollutants. The Campo Band of Diegueño Mission Indians (Tribe) and the Reservation are not subject to the State Implementation Plan.

Campo Band of Diegueño Mission Indians Land Use Plan (Campo Land Use Plan)

Under the Campo Lease, the Campo Land Use Plan is not applicable to the Campo Wind Facilities, although the Campo Wind Facilities are included in this analysis for informational purposes.

The Campo Land Use Plan states that it is the intention of the Tribe to pursue diversity in land use. Tribal lands have been designated for a variety of purposes, including wilderness/recreational, residential/grazing/agricultural, commercial and light industrial, and civic uses.

Campo Renewable Energy Zones

The Campo Land Use Plan allows for the creation of a Campo Renewable Energy Zone (CREZ), which allows for the development of wind and solar energy developments within any district and any land use designation within the Reservation, as approved by the General Council. Muht Hei Inc, the economic development arm of the Campo Kumeyaay Nation, may designate a CREZ over one or more areas of land within the Reservation where development potential for renewable energy development, resources, or related businesses is commercially feasible, provided that such designation is an overlay that does not change the underlying land use designation approved by the General Council, and provided further that the designation of the CREZ satisfies the following criteria (Campo Band of Mission Indians 2010):

1. ***Five-Percent Standard Analysis.*** The CREZ shall not adversely impact the land use designation of any district by more than five percent (5%) without completion of a detailed impact analysis and approval of the General Council. This is a threshold impact analysis

(to determine if the 5% standard is exceeded. The analysis shall cover the categories defined in the National Environmental Policy Act (NEPA) and its implementing regulations, but will use standards defined by the Band in this Plan. The Executive Committee may assign the impact analysis to CEPA, an independent, qualified consulting firm or rely upon an existing impact analysis completed within the last three (3) years that was prepared by either CEPA or a consulting firm, so long as the analysis satisfies the CREZ criteria set forth in this Section (7) of this Plan.

2. ***Impact to Receptors Analysis.*** The CREZ must include an analysis of impacts to receptors (homes, businesses, offices, clinics, etc.) for safety, noise and visual impacts prior to any permanent development. The Executive Committee will determine if this analysis shall be conducted exclusively by CEPA or by a consultant pursuant to the NEPA. If a consultant completes this analysis, then the NEPA will govern the compliance process. In that event, CEPA will review and advise the Executive Committee as to any conflicts or omissions in the analysis that do not comply with tribal regulatory standards and the CEPA review, to the greatest extent possible, will be conducted concurrently with the work of the consultant so as to avoid delays in completion of the NEPA process and designation of the CREZ.

3. ***CREZ Permitted Uses.*** The CREZ may be used for commercial wind, solar, geothermal, hydrological, and other types of renewable energy generation that exploit existing energy resources not created by combustion, chemical or radioactive sources and that leverage market opportunities associated with the renewable energy sector for the benefit of the Band. The CREZ may include, without limitation, overhead and underground electrical distribution, collection, transmission and communications lines, electric transformers, electric substations, energy storage facilities, telecommunications equipment, and power generation facilities for the transmission of electrical energy, including, without limitation, the electrical energy generated by any wind turbines or solar panels; roads and crane pads; meteorological towers, wind and solar measurement equipment; control buildings, maintenance yards, and related facilities and equipment; and, any other undertakings or activities reasonably necessary, useful or appropriate to accomplish development of renewable energy resources and renewable energy business enterprises that may be developed in connection therewith.

4. ***Privately Owned Generation.*** The Band encourages and supports individual renewable energy generation and conservation for individual tribal members. The CREZ criteria shall not be applied to individual household renewable generation under 10,000 watts.

5. The REO does not change the original designation of the land except to the minimum level feasible to allow the assessment, data collection and/or development of the potential renewable energy resource.

3.1.2.3 Analysis of Project Effects and Determination as to Significance

Methodology

Although the County as Lead Agency is analyzing the Project as a whole, the County's land use jurisdiction is limited to the Boulder Brush Facilities. The Bureau of Indian Affairs has jurisdiction over the Campo Wind Facilities, and has prepared an Environmental Impact Statement to evaluate Project effects under NEPA (BIA 2019). This analysis adopts and incorporates by reference the Environmental Impact Statement. In addition, this section provides an analysis of Project impacts both on the Reservation and on private lands, pursuant to the requirements of the California Environmental Quality Act (CEQA) and consistent with the County's guidelines.

Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance do not explicitly address energy. Therefore, for this EIR, questions from Appendix G of the CEQA Guidelines have been used to assess the Project's direct, indirect, and cumulative impacts. Therefore, for the purpose of this EIR, a significant impact to energy would result if the Project would:

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

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

Analysis

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction, decommissioning, or operation?

Energy Consumption

Electricity

Construction and Decommissioning Use

Project

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be powered by diesel-fueled generators, as temporary construction

trailers would use electricity from existing nearby power lines. The amount of electricity used during construction and decommissioning 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 activities. Also, in accordance with Project Design Feature **(PDF) AQ-1** and Mitigation Measure **(M) AQ-1**, the Project would use electric-powered construction and decommissioning equipment where feasible. Consuming energy to construct a renewable energy project to reduce the state's GHG emissions from energy is not wasteful, inefficient, or unnecessary. The electricity used for construction and decommissioning activities would be temporary and minimal; therefore, impacts would be **less than significant**.

Boulder Brush Facilities

As described under the Project electricity consumption analysis above, temporary electric power would be as-necessary for construction but would be minimal. Consuming energy to construct a renewable energy project to reduce the state's GHG emissions from energy is not wasteful, inefficient, or unnecessary. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be **less than significant**.

Campo Wind Facilities

Although there are no specific requirements under NEPA for evaluating energy, analyzing energy from the Campo Wind Facilities are included for the purposes of disclosure and analysis. As described under the Project electricity consumption analysis above, temporary electric power would be as-necessary for construction but would be minimal. Consuming energy to construct a renewable energy project to reduce the state's GHG emissions from energy is not wasteful, inefficient, or unnecessary. The electricity used for construction activities would be temporary and minimal; therefore, impacts would be **less than significant**.

Operational Use

Project

Following completion of construction, the Project's operational phase would require electricity for powering the operations and maintenance (O&M) facility. The California Emissions Estimator Model (CalEEMod), Version 2016.3.2, the default value for electricity consumption for the office land use to represent the O&M facility, was applied for the Project (CAPCOA 2017). The electricity use for non-residential buildings was calculated in CalEEMod using energy intensity value (electricity use per square foot per year) assumptions, which were based on the California Commercial End-Use Survey database (CEC 2006).

The Project is estimated to have a total electrical demand of approximately 67,000 kWh per year, as reported in the CalEEMod output (see Appendix C). The non-residential electricity demand in 2016 was 12,879 million kWh for the County (CEC 2018). The Project's O&M facility would be built according to the current Title 24 standards at the time of construction and CalGreen. The Project is expected to renewably produce an order of magnitude more electricity per year than its estimated use. Therefore, due to the limited amount of electricity use compared to that generated by the Project, and the inherent increase in efficiency of building code regulations, the Project would not result in a wasteful, inefficient, or unnecessary use of energy. Impacts related to operational electricity use would be **less than significant**.

Boulder Brush Facilities

Boulder Brush Facilities would require negligible electricity consumption for operation. Therefore, impacts related to operational electricity use would be **less than significant.**

Campo Wind Facilities

As described under the Project electricity consumption above, electricity for powering the O&M facility would be required. As discussed above, the Campo Wind Facilities' total electricity demand would be 67,000 kWh per year (see Appendix C). The Campo Wind Facilities is expected to renewably produce an order of magnitude more electricity per year than its estimated use. Therefore, due to the limited amount of electricity use compared to that generated by the Project, and the inherent increase in efficiency of building code regulations, the Project would not result in a wasteful, inefficient, or unnecessary use of energy. Impacts related to operational electricity use would be **less than significant**.

Natural Gas

Construction and Decommissioning Use

Project

Natural gas is not anticipated to be required during construction and decommissioning of the Project. Fuels used for construction and decommissioning would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum," below. However, with implementation of **PDF-AQ-1** and **M-AQ-1**, the Project would use natural-gas-powered construction equipment where feasible, which would result in consumption of natural gas in lieu of petroleum use. Any minor amounts of natural gas that may be consumed as a result of Project construction and decommissioning would be temporary and negligible, and would not result in inefficient, wasteful, or unnecessary consumption; therefore, impacts would be **less than significant**.

Boulder Brush Facilities

As discussed above, natural gas is not anticipated to be required during construction of the Boulder Brush Facilities. However, with implementation of **PDF-AQ-1** and **M-AQ-1**, the Boulder Brush Facilities would use natural-gas-powered construction equipment where feasible, which would result in consumption of natural gas in lieu of petroleum use. Any minor amounts of natural gas that may be consumed as a result of the Boulder Brush Facilities construction would be temporary and negligible, and would not result in inefficient, wasteful, or unnecessary consumption; therefore, impacts would be **less than significant**.

Campo Wind Facilities

Although there are no specific requirements under NEPA for evaluating energy, analyzing energy from the Campo Wind Facilities are included for the purposes of disclosure and analysis. As discussed above, natural gas is not anticipated to be required during construction or decommissioning of the Campo Wind Facilities. However, with implementation of **PDF-AQ-1** and **M-AQ-1**, the Campo Wind Facilities would use natural-gas-powered construction equipment where feasible, which would result in consumption of natural gas in lieu of petroleum use. Any minor amounts of natural gas that may be consumed as a result of Campo Wind Facilities construction would be temporary and negligible, and would not result in inefficient, wasteful, or unnecessary consumption; therefore, impacts would be **less than significant**.

Operational Use

Project

The Project would not have natural gas service connected to the O&M facility. There would be no natural gas consumption during operation of the Project; therefore, there would be **no impact** related to operational natural gas use.

Boulder Brush Facilities

The Boulder Brush Facilities would not require natural gas service. There would be no natural gas consumption during operation of the Boulder Brush Facilities; therefore, there would be **no impact** related to operational natural gas use.

Campo Wind Facilities

Although there are no specific requirements under NEPA for evaluating energy, analyzing energy from the Campo Wind Facilities are included for the purposes of disclosure and analysis. As stated above, the Campo Wind Facilities would not have natural gas service connected to the O&M facility. There would be no natural gas consumption during operation of the Campo Wind Facilities; therefore, there would be **no impact** related to operational natural gas use.

Petroleum

Construction and Decommissioning Use

The Project is anticipated to operate for the term of the Campo Lease and any renewal extension (approximately 30 years, at minimum), after which it would be decommissioned, except for the SDG&E owned and operated switchyard and connection lines to Sunrise Powerlink, which would not be decommissioned.

Project

Petroleum would be consumed throughout construction and decommissioning of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction and decommissioning, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction and decommissioning activities, and haul trucks involved in relocating dirt around the Project Site would rely on diesel fuel. Construction workers would travel to and from the Project Site throughout construction and decommissioning. It is assumed that construction workers would travel to and from the Project Site in gasoline-powered vehicles. Construction equipment and fuel use associated with rock crushing are also included in this analysis.

Heavy-duty construction equipment of various types would be used during construction and decommissioning. CalEEMod was used to estimate construction equipment usage; results are included in Appendix C of this EIR. Based on that analysis, diesel-fueled construction equipment would operate for an estimated 113,000 hours and diesel-fueled equipment for decommissioning activities would operate for an estimated 25,000 hours, as summarized in Table 3.1.2-1, Hours of Operation for Construction and Decommissioning Equipment.

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel use from construction equipment and equipment associated with the decommissioning phase is shown in Table 3.1.2-2, Construction and Decommissioning Equipment Diesel Demand.

Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction and decommissioning phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 3.1.2-3, Construction and Decommissioning Worker Vehicle Gasoline Demand; Table 3.1.2-4, Construction and Decommissioning Vendor Truck Diesel Demand; and Table 3.1.2-5, Construction and Decommissioning Haul Truck Diesel Demand. As shown in Tables 3.1.2-2 through 3.1.2-5, the Project is estimated to consume 658,000 gallons of petroleum during the construction phase and 160,000 gallons of petroleum during the decommissioning phase. By comparison, approximately 12.2 billion gallons of petroleum would be consumed in California over the course of the Project's construction phase based on the California daily petroleum consumption estimate of approximately 52.9 million gallons per day (CEC 2016b). By comparison, Countywide total petroleum use by vehicles is expected to be 1.57 billion gallons per year by 2020 (CARB 2018). Thus, the total expected petroleum use from the Project's construction represents approximately 1.24% of California's consumption of petroleum per day and 0.042% of the County's total petroleum use per year. The Project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Also, in accordance with **PDF-AQ-1** and **M-AQ-1**, the Project would use Tier 4 Final construction equipment, and worker carpooling would be encouraged to reduce petroleum usage. Therefore, because petroleum use during construction and decommissioning would be short term and temporary, and would be a one-time use consumed as necessary for Project construction and decommissioning activities, and would not be wasteful or inefficient. Impacts would be **less than significant**.

Boulder Brush Facilities

Petroleum would be consumed throughout construction of the Boulder Brush Facilities. As discussed above, fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption.

Diesel-fueled construction equipment would operate for an estimated 41,508 hours. The Boulder Brush Facilities is estimated to consume 206,371 gallons of petroleum during the construction phase. The Boulder Brush Facilities would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Also, in accordance with **M-AQ-1**, the Boulder Brush Facilities would use Tier 4 Final construction equipment, and worker carpooling would be encouraged to reduce petroleum usage. Therefore, because petroleum use during construction would be short term and temporary, would be a one-time use consumed as necessary for project construction and decommissioning activities, and would not be wasteful or inefficient, impacts would be **less than significant**.

Campo Wind Facilities

Petroleum would be consumed throughout construction and decommissioning of the Campo Wind Facilities. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction and decommissioning, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Diesel-fueled construction equipment would operate for an estimated 71,690 hours, and diesel-fueled equipment for decommissioning activities would operate for an estimated 25,000 hours. The Campo Wind Facilities is estimated to consume 451,550 gallons of petroleum during the construction phase and 160,000 gallons of petroleum during the decommissioning phase. In accordance with **PDF-AQ-1**, the Campo Wind Facilities would use Tier 4 Final construction equipment, and worker carpooling would be encouraged to reduce petroleum usage. Therefore, because petroleum use during construction and decommissioning would be short term and temporary, would be a one-time use consumed as necessary for project construction and decommissioning activities, and would not be wasteful or inefficient, impacts would be **less than significant**.

Operational Use

Project

The majority of fuel consumption resulting from the Project's operational phase would be attributable to workers traveling to and from the Project Site, and worker vehicles traveling around the Project Site. Although the 10 to 12 workers employed during Project operations may come from areas closer to the Project Site, such as Campo, workers were conservatively assumed to travel from downtown San Diego, which includes worker vehicles traveling around the Project Site (approximately 68 miles one way).

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project Site during operation and worker vehicles traveling around the Project Site is a function of VMT. The annual VMT attributable to the Project is expected to be 242,835

VMT per year from the 10 to 12 operational employees traveling to and from the Project Site. Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO_2 emissions from the office land use type to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles were assumed to be gasoline powered.

Calculations for annual mobile-source fuel consumption are provided in Table 3.1.2-6, Petroleum Consumption – Operation. Mobile sources from the Project would result in approximately 12,000 gallons of gasoline per year beginning in late 2021. The Project would include four 150-kilowatt diesel emergency generators, required at the O&M Facility, the collector substation, the high-voltage substation, and the switchyard. Each generator was assumed to operate for testing and maintenance approximately 30 minutes each month for a total of up to 50 hours per year. The diesel generators for the Project are anticipated to use up to 1,000 gallons of diesel per year. By comparison, California as a whole consumes approximately 19.3 billion gallons of petroleum per year (CEC 2016b). Countywide total petroleum use by vehicles is expected to be 1.54 billion gallons per year by 2021 (CARB 2018).

Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the employees is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project Site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions from 2005 levels by 8% by 2020, and 13% by 2035 for light-duty passenger vehicles in the planning area for the San Diego Association of Governments. As such, operation of the Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy.

In summary, during operation, the Project would increase petroleum consumption as a result of 10 to 12 permanent employees commuting to the Project Site. This represents a slight increase in petroleum consumption compared to total County and state petroleum consumption, and due to efficiency increases, would diminish over time. The Project operational petroleum consumption is necessary for Project operation. Given these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful, and impacts would be **less than significant**.

Boulder Brush Facilities

The Boulder Brush Facilities would be unstaffed. The O&M facility for the Project (Campo Wind Project with Boulder Brush Facilities) would be located on the Reservation. Petroleum consumption during operation as a result of 10 to 12 permanent employees commuting to the Project Site is discussed under the Project above and Campo Wind Facilities below. Maintenance of the collector substation and Off-Reservation gen-tie line would be conducted by permanent employees commuting to the O&M facility on the Reservation. Maintenance of the SDG&E switchyard, which would be located within the Boulder Brush Corridor, would be performed by SDG&E personnel as needed. Petroleum consumption for operations and maintenance of the Boulder Brush Facilities would represent a slight increase in petroleum consumption compared to total County and state consumption, and due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the Boulder Brush Facilities would not be considered inefficient or wasteful, and impacts would be **less than significant**.

Campo Wind Facilities

The majority of fuel consumption resulting from the operational phase would be attributable to workers traveling to and from and around the Project Site, including the Campo Wind Facilities. Although the 10 to 12 workers may come from areas closer to the Campo Wind Facilities, such as Campo, workers were conservatively assumed to travel from downtown San Diego (approximately 68 miles one way), including worker vehicles traveling around the Campo Wind Facilities.

Because these worker trips are for periodic maintenance activities at the Campo Wind Facilities, the petroleum fuel consumption associated with motor vehicles traveling to and from the Campo Wind Facilities would be a portion of the motor vehicles traveling to and from the Project Site. The annual VMT attributable to the Project is expected to be 242,835 VMT per year from the 10 to 12 operational employees traveling to and from the Project Site from downtown San Diego; therefore, the annual VMT from the 10 to 12 operational employees traveling to and from the Campo Wind Facilities would be a portion of the VMT for the Project.

As discussed above, although the Campo Wind Facilities would slightly increase petroleum consumption compared to the state and County petroleum consumption total use during operation as a result of 10 to 12 permanent employees, the use would be a small fraction of the statewide use and, due to efficiency increases, would diminish over time. Operational petroleum consumption is necessary for the operation of the Campo Wind Facilities. Given these considerations, petroleum consumption associated with the Campo Wind Facilities would not be considered inefficient or wasteful, and impacts would be **less than significant**.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project

State and local regulations are applicable to the Boulder Brush Facilities located on private lands within the County. State and local regulations are not applicable to the Reservation.

Conflict with Energy Standards, Regulations, Plans, and Policies

The Project's O&M facility would meet the Title 24 and CalGreen standards to reduce energy demand and increase energy efficiency. Additionally, it is anticipated that worker vehicles would meet the applicable standards of AB 1493 (AB 1493 applies to vehicles manufactured in 2009 or later), and as a result, would likely consume less energy as fuel efficiency standards increase and vehicles are replaced.

The Project would assist the County in fulfilling Goal E-2.1, Increase Renewable Electricity, of the County's Climate Action Plan (County of San Diego 2018). The Project is expected to produce an estimated 756,000 MWh of electricity per year. Moreover, the Project would support implementation of the County's Renewable Energy Plan through implementation of additional renewable energy generation facilities within the County. Refer to Section 3.1.6 of this EIR for a detailed analysis of the Project's consistency with energy-related policies delineated in the County's General Plan.

The Campo Land Use Plan allows for the creation of a CREZ, which would allow for the development of wind and solar energy developments within any district and any land use designation within the Reservation, as approved by the General Council. As described in detail in Section 3.1.6 of this EIR, a CREZ would be processed and created as part of the Project. Provided the Project satisfies the standards listed for the creation of a CREZ, and provided the General Council approves the creation of a CREZ for the Project, the Project would not conflict with a Tribal land use regulation. While the Campo Land Use Plan's main goal is to ensure development is consistent with its economic and social goals and does not threaten environmental or cultural resources, the Campo Land Use Plan also recognizes the importance of long-term planning that ensures future growth will not harm the existing environment. Long-term benefits would include the use of wind energy, a renewable resource to provide a nonpolluting source of electricity to meet forecasted energy demands, reduction of fossil fuel demands and carbon output due to energy generation, a potential reduction of GHGs associated with regional energy production, and betterment of the economic conditions of the Tribe through the economic terms of the Campo Lease and job creation.

For the reasons stated above, the Project would be consistent with all applicable energy standards, regulations, plans, and policies; therefore, impacts would be **less than significant**.

Demand on Local and Regional Energy Supply

Electricity

As previously described, the Project is estimated to have a total electrical demand of 67,000 kWh per year. The non-residential electricity demand in 2016 was 12,879 million kWh for San Diego County (CEC 2018). The Project would generate a significant amount of electricity that would be added to SDG&E's power supply. As such, the Project would have a negligible impact on demand for SDG&E, and impacts would be **less than significant**.

Natural Gas

As previously described, the Project would use little to no natural gas during construction and decommissioning. The Project would not use natural gas during operation. In summary, the Project's demand for natural gas would not have a significant impact on the local utility; therefore, impacts would be **less than significant**.

Petroleum

During construction, the Project is anticipated to use 658,000 gallons of petroleum over the short-term construction period and 160,000 gallons of petroleum over the short-term decommissioning period. By comparison, Countywide total petroleum use by vehicles is expected to be 1.57 billion gallons per year by 2020 (CARB 2018).

During operation, the Project is anticipated to use 12,000 gallons of petroleum per year. By comparison, Countywide total petroleum use by vehicles is expected to be 1.54 billion gallons per year by 2021 (CARB 2018).

Although the Project would see a minimal increase in petroleum use during construction, decommissioning, and operation (compared to the existing conditions), this use would be a small fraction of the overall regional use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the Project would not be considered a substantial demand on local or regional supply; therefore, impacts would be **less than significant**.

Boulder Brush Facilities

The Boulder Brush Facilities are necessary to transmit the energy produced by the Campo Wind Facilities wind turbines to end users. Worker vehicles would meet the applicable standards of AB 1493 (AB 1493 applies to vehicles manufactured in 2009 or later). As discussed above, the Boulder Brush Facilities would be consistent with all applicable energy standards, regulations, plans, and policies. Furthermore, the Boulder Brush Facilities would not be considered a substantial demand on local or regional energy supply; therefore, impacts would be **less than significant**.

Campo Wind Facilities

As discussed above, the Campo Land Use Plan recognizes the importance of long-term planning that ensures future growth will not harm the existing environment. Long-term benefits would include the use of wind energy, a renewable resource to provide a nonpolluting source of electricity to meet forecasted energy demands, reduction of fossil fuel demands and carbon output due to energy generation, a potential reduction of GHGs associated with regional energy production, and betterment of the economic conditions of the Tribe through the economic terms of the Campo Lease and job creation. For the reasons stated above, the Project would be consistent with all applicable energy standards, regulations, plans, and policies; therefore, impacts would be **less than significant**.

3.1.2.4 Cumulative Impact Analysis

Project

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 and/or operation. The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. 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 (see Figure 1-11, Cumulative Projects, and Table 1-4, Cumulative – Reasonably Foreseeable, Approved, and Pending Projects, in Chapter 1, Project Description, Location, and Environmental Setting, of this EIR) would result in an increase in regional renewable energy supply.

As previously described, the Project would not result in wasteful, inefficient, or unnecessary use of energy due to the Project's production of renewable energy. Cumulative projects located within County jurisdiction that include long-term energy demand, such as residential developments, would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. CALGreen would implement increasingly stringent energy efficiency standards that would require the Boulder Brush Facilities and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements, including the objectives set in the AB 32 Scoping Plan (CARB 2017), which would seek to make all newly constructed residential homes produce a sustainable amount of renewable energy through the use of on-site photovoltaic solar systems. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In consideration of cumulative energy use, the Project would not contribute to a 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. Therefore, the Project would have a **less than cumulatively considerable** impact to the wasteful or inefficient use of energy. As such, the Project would not result in a cumulatively considerable contribution to a potential cumulative impact.

Boulder Brush Facilities

As discussed above, the Boulder Brush Facilities would not contribute to a 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 Boulder Brush Facilities. Therefore, the Boulder Brush Facilities would have a **less than cumulatively considerable impact** to the wasteful or inefficient use of energy. As such, the Boulder Brush Facilities would not result in a cumulatively considerable contribution to a potential cumulative impact.

Campo Wind Facilities

As discussed above, the Campo Wind Facilities would not contribute to a 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 Campo Wind Facilities. Therefore, the Campo Wind Facilities would have a **less than cumulatively considerable impact** to the wasteful or inefficient use of energy. As such, the Campo Wind Facilities would not result in a cumulatively considerable contribution to a potential cumulative impact.

3.1.2.5 Significance of Impacts Prior to Mitigation

Project

Energy impacts related to the development of the Project would not result in wasteful or inefficient use, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County's General Plan policies. Therefore, impacts would be **less than significant**.

Boulder Brush Facilities

Energy impacts related to the development of the Boulder Brush Facilities would not result in wasteful or inefficient use, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County's General Plan policies. Therefore, impacts would be **less than significant**.

Campo Wind Facilities

Energy impacts related to the development of the Campo Wind Facilities would not result in wasteful or inefficient use, and would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing energy consumption. Therefore, impacts would be **less than significant**.

3.1.2.6 Conclusion

Project

The Project would comply with regulatory requirements and would compose a small fraction of the estimated regional non-residential energy demand during Project operations. As such, the Project would not result in the wasteful or inefficient use of electricity, and Project impacts related to energy would be **less than significant**.

Boulder Brush Facilities

As stated above, the Project would comply with regulatory requirements and would comprise a small fraction of the estimated regional non-residential energy demand during Project operations.

Additionally, the Boulder Brush Facilities would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing energy consumption, including the County's General Plan policies. Furthermore, the Project would assist the County in fulfilling Goal E-2.1, Increase Renewable Electricity, of the County's Climate Action Plan (County of San Diego 2018) and the state's targets for electricity supply from renewable sources. As a result, impacts would be **less than significant**.

Campo Wind Facilities

As stated above, the Project would comply with regulatory requirements and would comprise a small fraction of the estimated regional non-residential energy demand during Project operations. Additionally, the Campo Wind Facilities would not conflict with the Campo Land Use Plan. As a result, impacts would be **less than significant**.

Table 3.1.2-1
Estimated Hours of Operation for Construction and Decommissioning Equipment

Name	Phase	Estimated Hours of Equipment Use
Construction		
Campo Wind Facilities	Clearing and grading	7,440
Campo Wind Facilities	Construction of access roads	10,400
Campo Wind Facilities	Gen-tie line foundation construction and pole erection	984
Campo Wind Facilities	Wind turbine foundation construction	3,920
Campo Wind Facilities	Gen-tie line stringing and pulling	336
Campo Wind Facilities	Construction of underground electrical collection system	7,700
Campo Wind Facilities	Wind turbine erection	26,950
Campo Wind Facilities	Operations and maintenance facility	4,650
Campo Wind Facilities	Construction of collector substation	8,360
Campo Wind Facilities	Meteorological towers	950
Boulder Brush Facilities	Clearing and grading	1,850
Boulder Brush Facilities	High-voltage substation and switchyard	26,200
Boulder Brush Facilities	Unpaved construction of access roads	4,750
Boulder Brush Facilities	Gen-tie line foundation construction and pole erection	656
Boulder Brush Facilities	Gen-tie line stringing and pulling	3,892
Boulder Brush Facilities	Paving of switchyard access road	4,160
	Total	**113,198**
*Decommissioning**		
Campo Wind Facilities	Site disassembly and removal	17,680
Campo Wind Facilities	Site cleanup and restoration	352
Boulder Brush Facilities	System disassembly and removal	6,800
Boulder Brush Facilities	Site cleanup and restoration	368
	Total	**25,200**

Source: Appendix C.
* SDG&E-owned and operated switchyard and connection lines to Sunrise Powerlink would not be decommissioned.

Table 3.1.2-2
Estimated Construction and Decommissioning Equipment Diesel Demand

Name	Phase	Pieces of Equipment[a]	Equipment CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Construction					
Campo Wind Facilities	Clearing and grading	15	390.91	10.21	38,287.36
Campo Wind Facilities	Construction of access roads	10	516.46	10.21	50,584.18
Campo Wind Facilities	Gen-tie line foundation construction and pole erection	13	23.31	10.21	2,282.72
Campo Wind Facilities	Wind turbine foundation construction	7	114.87	10.21	11,250.30
Campo Wind Facilities	Gen-tie line stringing and pulling	2	5.55	10.21	543.67
Campo Wind Facilities	Construction of underground electrical collection system	9	181.43	10.21	17,770.02
Campo Wind Facilities	Wind turbine erection	33	728.86	10.21	71,387.34
Campo Wind Facilities	Operations and maintenance facility	14	111.27	10.21	10,898.08
Campo Wind Facilities	Construction of collector substation	10	196.48	10.21	19,243.51
Campo Wind Facilities	Meteorological towers	5	25.01	10.21	2,449.74
Boulder Brush Facilities	High-voltage substation and switchyard	10	741.91	10.21	72,665.24
Boulder Brush Facilities	Clearing and grading	17	63.56	10.21	6,225.57
Boulder Brush Facilities	Unpaved construction of access roads	12	150.53	10.21	14,743.14
Boulder Brush Facilities	Gen-tie line foundation construction and pole erection	6	15.54	10.21	1,521.81
Boulder Brush Facilities	Gen-tie line stringing and pulling	2	64.30	10.21	6,297.51
Boulder Brush Facilities	Paving of switchyard access road	13	73.38	10.21	7,187.17
				Total	**333,337.37**
*Decommissioning**					
Campo Wind Facilities	Site disassembly and removal	17	921.45	10.21	90,249.32
Campo Wind Facilities	Site cleanup and restoration	2	10.04	10.21	983.35
Boulder Brush Facilities	System disassembly and removal	10	373.51	10.21	36,583.15
Boulder Brush Facilities	Site cleanup and restoration	2	10.50	10.21	1,028.05
				Total	**128,843.88**

Sources:
[a] Appendix C.
[b] The Climate Registry 2019.
CO_2 = carbon dioxide; MT = metric ton.
* SDG&E-owned and operated switchyard and connection lines to Sunrise Powerlink would not be decommissioned.

Table 3.1.2-3
Estimated Construction and Decommissioning Worker Vehicle Gasoline Demand

Name	Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Construction					
Campo Wind Facilities	Clearing and grading	4,464	38.35	8.78	4,368.05
Campo Wind Facilities	Construction of access roads	15,600	131.97	8.78	15,030.85
Campo Wind Facilities	Gen-tie line foundation construction and pole erection	2,304	19.79	8.78	2,254.48
Campo Wind Facilities	Wind turbine foundation construction	11,760	98.16	8.78	11,179.86
Campo Wind Facilities	Gen-tie line stringing and pulling	1,728	14.40	8.78	1,639.65
Campo Wind Facilities	Construction of underground electrical collection system	26,400	219.64	8.78	25,016.00
Campo Wind Facilities	Wind turbine erection	15,840	131.78	8.78	15,009.60
Campo Wind Facilities	Operations and maintenance facility	18,600	154.75	8.78	17,624.91
Campo Wind Facilities	Construction of collector substation	5,280	43.93	8.78	5,003.20
Campo Wind Facilities	Meteorological towers	600	4.95	8.78	564.09
Boulder Brush Facilities	High-voltage substation and switchyard	28,800	242.23	8.78	27,588.75
Boulder Brush Facilities	Clearing and grading	1,200	10.31	8.78	1,174.20
Boulder Brush Facilities	Unpaved construction of access roads	2,400	20.62	8.78	2,348.42
Boulder Brush Facilities	Gen-tie line foundation construction and pole erection	1,536	13.20	8.78	1,502.98
				Total	**151,811.18**
Decommissioning					
Campo Wind Facilities	Site disassembly and removal	21,840	110.36	8.78	12,569.61
Campo Wind Facilities	Site cleanup and restoration	1,584	8.00	8.78	911.64
Boulder Brush Facilities	System disassembly and removal	8,160	41.23	8.78	4,696.34
Boulder Brush Facilities	Site cleanup and restoration	1,104	5.58	8.78	635.39
				Total	**18,812.98**

Sources:
[a] Appendix C.
[b] The Climate Registry 2019.
CO_2 = carbon dioxide; MT = metric ton.
* SDG&E-owned and operated switchyard and connection lines to Sunrise Powerlink would not be decommissioned.

Table 3.1.2-4
Estimated Construction and Decommissioning Vendor Truck Diesel Demand

Name	Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Construction					
Campo Wind Facilities	Clearing and grading	6,696	477.12	10.21	46,730.98
Campo Wind Facilities	Construction of access roads	0	0.00	10.21	0.00
Campo Wind Facilities	Gen-tie line foundation construction and pole erection	240	17.10	10.21	1,674.95
Campo Wind Facilities	Wind turbine foundation construction	1,400	98.96	10.21	9,692.05
Campo Wind Facilities	Gen-tie line stringing and pulling	240	16.96	10.21	1,660.63
Campo Wind Facilities	Construction of underground electrical collection system	1,320	93.22	10.21	9,130.00
Campo Wind Facilities	Wind turbine erection	0	0.00	10.21	0.00
Campo Wind Facilities	Operations and maintenance facility	620	43.78	10.21	4,288.33
Campo Wind Facilities	Construction of collector substation	330	23.30	10.21	2,282.50
Campo Wind Facilities	Meteorological towers	100	7.06	10.21	691.67
Boulder Brush Facilities	High-voltage substation and switchyard	1,600	113.33	10.21	11,099.78
Boulder Brush Facilities	Clearing and grading	500	35.63	10.21	3,489.47
Boulder Brush Facilities	Unpaved construction of access roads	500	35.63	10.21	3,489.47
Boulder Brush Facilities	Gen-tie line foundation construction and pole erection	160	11.40	10.21	1,116.63
				Total	**114,585.38**
Decommissioning					
—	—	—	—	—	—

Sources:
[a] Appendix C.
[b] The Climate Registry 2019.
CO_2 = carbon dioxide; MT = metric ton.

Table 3.1.2-5
Estimated Construction and Decommissioning Haul Truck Diesel Demand

Name	Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Construction					
Campo Wind Facilities	Clearing and grading	734	78.61	10.21	7,699.79
Campo Wind Facilities	Construction of access roads	22	2.34	10.21	229.43
Campo Wind Facilities	Gen-tie line foundation construction and pole erection	30	3.21	10.21	314.70
Campo Wind Facilities	Wind turbine foundation construction	3,046	322.69	10.21	31,605.40

Table 3.1.2-5
Estimated Construction and Decommissioning Haul Truck Diesel Demand

Name	Phase	Trips	Vehicle CO_2 (MT)[a]	Kilograms CO_2 per Gallon[b]	Gallons
Construction					
Campo Wind Facilities	Gen-tie line stringing and pulling	20	2.12	10.21	207.38
Campo Wind Facilities	Construction of underground electrical collection system	368	38.94	10.21	3,813.71
Campo Wind Facilities	Wind turbine erection	720	76.18	10.21	7,461.62
Campo Wind Facilities	Operations and maintenance facility	20	2.12	10.21	207.27
Campo Wind Facilities	Construction of collector substation	138	14.60	10.21	1,430.15
Campo Wind Facilities	Meteorological towers	4	0.42	10.21	41.45
Boulder Brush Facilities	High-voltage substation and switchyard	415	44.09	10.21	4,318.40
Boulder Brush Facilities	Clearing and grading	0	0.00	10.21	0.00
Boulder Brush Facilities	Unpaved construction of access roads	32	3.43	10.21	335.69
Boulder Brush Facilities	Gen-tie line foundation construction and pole erection	30	3.21	10.21	314.70
				Total	**58,187.11**
*Decommissioning**					
Campo Wind Facilities	Site disassembly and removal	1,178	125.51	10.21	12,292.77
Campo Wind Facilities	Site cleanup and restoration	0	0.00	10.21	0.00
Boulder Brush Facilities	System disassembly and removal	30	3.74	10.21	366.07
Boulder Brush Facilities	Site cleanup and restoration	0	0.00	10.21	0.00
				Total	**12,658.84**

Sources:
[a] Appendix C.
[b] The Climate Registry 2019.
CO_2 = carbon dioxide; MT = metric ton.
* SDG&E-owned and operated switchyard and connection lines to Sunrise Powerlink would not be decommissioned.

Table 3.1.2-6
Estimated Petroleum Consumption – Operation

Fuel	Vehicle MT CO_2	Kilograms CO_2 per Gallon	Gallons
Gasoline	102.85	8.78	11,713.93
Diesel	15.23	10.21	1,491.86
		Total	**13,205.79**

Sources:
[a] Appendix C.
[b] The Climate Registry 2019.
CO_2 = carbon dioxide; MT = metric ton.

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