4.5 Energy

This section describes the existing energy conditions on the project site and in its vicinity, identifies associated regulatory requirements, and evaluates potential impacts, and identifies project design features related to implementation of the proposed project.

Methods for Analysis

The following analysis is based on the Energy Technical Report prepared by Ramboll (Appendix 4.5-1). This environmental impact report (EIR) section evaluates the energy consumption associated with project-related construction activities and operational activities for complete buildout of the proposed project. Project buildout is estimated to be realized in calendar year 2037. Because California has adopted regulatory measures for greenhouse gas (GHG) emissions that take effect by 2030 and serve to influence energy consumption, some aspects of the energy inventory are based on adopted 2030 regulatory measures (e.g., Renewables Portfolio Standard [RPS]). Other aspects of the energy inventory also are representative of project conditions at full buildout. For example, the California Emissions Estimator Model (CalEEMod), which was used to estimate construction and operational energy use, allows for operational years up to 2035; given that the mobile emission factors are based on the operational year, the mobile emission factors used to estimate the corresponding consumption of transportation fuels are based on values from EMFAC2014 for the year 2035.

The analysis is conservative because further beneficial changes to California's regulatory framework, serving to reduce energy consumption and enhance energy efficiency, are reasonably anticipated with the passage of time. For example, California revises its building energy standards (as set forth in Title 24 of the California Code of Regulations) on a periodic basis. More specifically, California's building codes are published in their entirety every 3 years. Intervening Code Adoption Cycles produce supplement pages half-way (18 months) into each triennial period. The next Title 24 code to be published is the 2019 Code; the corresponding building energy standards were adopted in May 2018 and will take effect in January 2020. Each subsequent building code has required more energy efficiency than the previous codes. Accordingly, because this analysis is based on current codes (i.e., the 2016 Code), it necessarily will result in an overestimate of energy usage in buildings.

Summary of Notice of Preparation Comments

A Notice of Preparation (NOP) was circulated from January 19, 2019 to February 19, 2019. A total of 150 letters were received during this comment period. Comments received related to energy addressed building electrification, renewable energy, smart growth, and zero net energy. Please see Appendix A, NOP Scoping Comments, for a complete compilation of comments received on the NOP.

Project Design Features

The proposed project would include several project design features (PDFs) that are relevant to the analysis provided in this section of the EIR, as follows.

Solar Photovoltaic Panels

The proposed project is incorporating solar photovoltaic (PV) panels on available roof space that is expected to result in a total generation capacity equivalent to 10,819,478 kilowatt hours (kWh) of electricity, or 14.9% of the proposed project's total electricity demand.

Electric Vehicle-Ready Infrastructure and Electric Vehicle Chargers

The proposed project is equipping 3% of total residential parking spaces and 6% of total nonresidential parking spaces with appropriate electric supply equipment to allow for the future installation of electric vehicle (EV) chargers (i.e., "EV ready"). Of these EV-ready spaces, 50% will be equipped with EV charging stations. In total, approximately 500 spaces will be designated as "EV ready," and 252 of the "EV ready" spaces will be equipped with operable EV charging stations.

Transportation Demand Management Program

The proposed project includes a Transportation Demand Management (TDM) Program that incentivizes alternative transportation besides single commuter trips. The TDM Program consists of the following strategies:

- Land Use Diversity
- Neighborhood Site Enhancement
  - New Bicycle Facilities
  - Dedicated Land for Bicycle/Multi-Use Trails
  - Bicycle Parking
  - Showers and Lockers in Employment Areas
  - Increased Intersection Density
  - Traffic Calming
  - Car Share Service Accommodations
  - Enhanced Pedestrian Network
- Parking Policy and Pricing
  - Unbundled Residential Parking
  - Metered On-Street Parking
  - Reduced Parking Supply
- Commute Trip Reduction Services
  - TDM Program Coordinator and Marketing
  - Electric Bike-Share Accommodations
  - Ridesharing Support
  - School Pool
  - Hotel Shuttle Service

These programs, as they pertain to non-stadium land uses, are expected to reduce vehicle miles traveled (VMT) and the corresponding consumption of gasoline by 14.41%.

The TDM Program strategies described above apply to the proposed project's campus educational, office, residential, and retail uses. TDM Program strategies also have been developed exclusively for the project's Stadium land use that are not listed here, as they are not quantitatively accounted for in this analysis. For additional information on the project's TDM Program, both with respect to campus Stadium and non-Stadium uses, please see Fehr & Peers' Transportation Impact Analysis (Appendix 4.15-1) for the project.

Residential Hearths

The proposed project is incorporating a limited number of natural gas fireplaces, and no wood-burning fireplaces, within project residences. Of all residential units in the proposed project, up to 5% of the units may include a natural gas fireplace. This serves to minimize the consumption of natural gas within the building envelopes of project residences.

Other PDFs with energy conservation benefits that have been considered qualitatively in this analysis include the following:

- The layout of the proposed project's development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. This includes benefits from the existing Metropolitan Transit System (MTS) Green Line that runs through the proposed project and Stadium Trolley Station, as well as the planned Purple Line and transit station.
- The campus locates buildings in close proximity to one another, which would facilitate the use of common heating/cooling sources, where feasible, as project-level development proceeds. (The use of common heating/cooling sources will be evaluated as the building plans for individual development parcels are developed; relevant factors that will influence the use of such sources include the temporal proximity of development, type of use, and market forces.)
- Project development areas would maximize natural ventilation.
- The proposed project integrates extensive parks and landscaping, including the planting of new, on-site trees to minimize heat gain.
- The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution.
- The proposed project would achieve Leadership in Energy and Environmental Design (LEED) Version 4 at a Silver or better certification level, as well as a Neighborhood Development designation for site-wide design. LEED certification is based on standards that encourage the development of energy-efficient and sustainable buildings.
- Events at the proposed project's multipurpose Stadium would benefit from implementation of TDM Program strategies specifically developed for application to Stadium-related events. These strategies focus on the use of alternative modes of transportation, including transit, to reduce single-occupancy vehicle usage and parking demand on event days.

It also is noted that, to the extent applicable, project-related development will comply with the principles and goals set forth in the California State University Sustainability Policy adopted by the California State University Board of Trustees in 2014.

4.5.1 Existing Conditions

Energy Production and Distribution

Among the states, California ranks fourth in the nation in production of crude oil; fifteenth in production of natural gas; second in generation of hydroelectric power; fifteenth in electricity generation from nuclear power; second in net electricity generation from all other renewable energy sources besides hydroelectric; and first as a producer of electricity from biomass, geothermal, and solar energy (EIA 2018a). California produces approximately 10% of the natural gas used in the state; approximately 90% of the natural gas used in California is imported from Canada, the Southwest, and the Rocky Mountains region of the United States. Over half of the crude oil refined in California is from foreign countries, including Saudi Arabia, Ecuador, and Colombia. Additional crude oil is imported from Alaska. Over one-fourth of California's electricity is from out-of-state locations in the Pacific Northwest and the Southwest (EIA 2018b).

Electricity and Natural Gas Supply

The production of electricity requires the combustion, consumption, or conversion of other energy resources, including water, wind, oil, natural gas, coal, solar, geothermal, and nuclear. Of the electricity that is generated within the state, 53% is generated by natural gas-fired power plants, 11% by nuclear power plants, 10% by hydroelectric, and the remaining 26% by other renewables (CEC 2018a).

Natural gas ultimately supplies the largest portion of California's electricity market; natural gas-fired power plants in California meet approximately 34% of the in-state electricity demand (CEC 2018a). In addition to the generation of electricity, natural gas is also widely used for industrial, commercial, and residential heating. Most of the natural gas consumed in California comes from the Southwest, the Rocky Mountains, and Canada, while the remainder is produced in California. Although contractually California can receive natural gas from any producing region in North America, it can only take supplies from these three producing regions due to the current pipeline configuration.

In the City of San Diego, San Diego Gas & Electric Company (SDG&E) is the primary supplier of electricity and natural gas to businesses and residents of the area. SDG&E's 4,100-square-mile service area extends from southern Orange County to San Diego County. SDG&E's electricity production facilities include natural gas-fired and peaking power plants. SDG&E obtains its energy supplies from plants in Southern California and southern Nevada. SDG&E has installed numerous solar energy projects or PV power-generation equipment, throughout its service territory. In 2017, about 45% of the energy delivered to SDG&E's customers came from renewable energy-related projects. In addition, in 2017, SDG&E activated the world's largest lithium ion battery storage facility, capable of storing up to 120 megawatt hours of electricity.

Transportation Fuels Supply

Most petroleum fuel refined in California is for use in on-road motor vehicles and is refined within California to meet state-specific formulations required by the California Air Resources Board (CARB). The major categories of petroleum fuels are gasoline and diesel for passenger vehicles, transit, and rail vehicles; and fuel oil for industry and emergency electrical power generation. Other liquid fuels include kerosene, jet fuel, and residual fuel oil for marine vessels.

California's oil fields make it the third-largest petroleum-producing state in the United States, behind Texas and North Dakota (federal offshore production is the biggest producer in the United States). Crude oil is moved from area to area within California through a network of pipelines that carry it from both onshore and offshore oil wells to the refineries that are located in the San Francisco Bay area, the Los Angeles area, and the Central Valley. Currently, 16 petroleum refineries operate in California, processing approximately 2.0 million barrels per day of crude oil (EIA 2018c).

Other transportation fuel sources are alternative fuels, such as methanol and denatured ethanol (alcohol mixtures that contain no less than 70% alcohol), natural gas (compressed or liquefied), liquefied petroleum gas, hydrogen, and fuels derived from biological materials (i.e., biomass).

Electricity and Natural Gas Consumption

Californians consumed 288,613 gigawatt hours (GWh) of electricity in 2017, which is the most recent year for which data is available. Of this total, the City of San Diego consumed 7,739 GWh (City of San Diego 2018).

Californians consumed 12,571 million therms of natural gas in 2017. Of this total, the City of San Diego consumed 384 million therms of natural gas (City of San Diego 2018).

Existing Energy Consumption

The project site includes three existing uses: (1) a multipurpose Stadium (San Diego County Credit Union Stadium) with an existing capacity of approximately 71,500 seats for football and other events; (2) an associated surface parking lot with approximately 18,870 parking spaces; and (3) the MTS's existing Trolley Green Line transit station, which provides trolley service running toward downtown San Diego to the west and Santee to the east. The San Diego State University main campus is three trolley stops from the existing on-site Trolley Station.

According to Appendix 4.5-1, total annual electricity and natural gas use is estimated to be 4,660,920 kWh and 1,822,990 kilo British thermal units (kBtu), respectively, for the existing Stadium (based on a review of meter readings). Mobile gasoline fuel usage is estimated to be 198,367 gallons per year for the existing condition.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 was established in response to the oil crisis of 1973, which increased oil prices due to a shortage of reserves. The Act requires that all vehicles sold in the United States meet certain fuel economy goals, known as the Corporate Average Fuel Economy standards. The National Highway Traffic Safety Administration (NHTSA) of the U.S. Department of Transportation administers the Corporate Average Fuel Economy program, and the U.S. Environmental Protection Agency (EPA) provides the fuel economy data.

In April 2010, the EPA and NHTSA issued a final rulemaking establishing new federal fuel economy standards for model years 2012 to 2016 passenger cars and light-duty trucks. For model year 2012, the

fuel economy standards for passenger cars, light trucks, and combined cars and trucks were 33.3 miles per gallon (mpg), 25.4 mpg, and 29.7 mpg, respectively (EPA 2010). These standards increase progressively up to 37.8 mpg, 28.8 mpg, and 34.1 mpg, respectively, for model year 2016. In subsequent rulemakings, the agencies extended the national program of fuel economy standards to passenger vehicles and light-duty trucks of model years 2017–2025, culminating in fuel economy of 54.5 mpg by model year 2025, as well as to medium- and heavy-duty vehicles of model years 2014–2018, including large pickup trucks and vans, semi-trucks, and all types and sizes of work trucks and buses (EPA 2011, 2012).

In August 2016, the EPA and NHTSA adopted the next phase (Phase 2) of the fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles with model year 2018 and later (EPA 2012). In response to the EPA's adoption of the Phase 2 standards, CARB staff brought a proposed California Phase 2 program before its Board in 2017; and the Board approved the program in March 2018 (CARB 2018).

In 2018, the EPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy standards for passenger cars and light trucks and establish new standards, covering model years 2021–2026. Compared to maintaining the post-2020 standards now in place, the pending proposal would increase U.S. fuel consumption. California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. Because the pending proposal is still in the rulemaking phase, and because legal challenges to any future adoption of the proposal is likely, the timing and consequences of the pending proposal are speculative at this time.

Energy Policy Act of 2005 and Energy Independence and Security Act of 2007

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Energy Policy Act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products. Because driving fuel-efficient vehicles and installing energy-efficient appliances can provide many benefits, such as lower energy bills, increased indoor comfort, and reduced air pollution, businesses are eligible for tax credits for buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are given for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

The Energy Policy Act of 2005 also established the first renewable fuel volume mandate in the United States. The original Renewable Fuel Standard program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Energy Independence and Security Act of 2007, the Renewable Fuel Standard program was expanded to include diesel and to increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.

American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act of 2009 was passed in response to the economic crisis of the late 2000s, with the primary purpose of maintaining existing jobs and creating new jobs. Among the secondary objectives of the American Recovery and Reinvestment Act was investment in "green" energy programs, including funding the following through grants, loans, or other mechanisms: private companies developing renewable energy technologies; local and state governments implementing energy efficiency and clean energy programs; research in renewable energy, biofuels, and carbon capture; and development of high efficiency or electric vehicles.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promotes the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contains factors that metropolitan planning organizations (MPOs), such as the San Diego Association of Governments (SANDAG), are to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs have adopted explicit policies defining the social, economic, energy, and environmental values that guide transportation decisions in their respective metropolitan areas. The planning process for specific projects would then address these policies. Another requirement of ISTEA is to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption is expected to be a decision criterion, along with cost and other values, to determine the best transportation solution.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century ("TEA-21") was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State

Assembly Bill 32 and Senate Bill 32 (Statewide GHG Reductions with Energy Co-Benefits)

The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) was signed into law in September 2006 (CARB 2006). The law instructed CARB to develop and enforce regulations for the reporting and verification of state-wide GHG emissions. The bulk of GHG emissions in California are carbon dioxide that result from fossil fuel consumption. Therefore, a reduction in GHG emissions typically translates into reduced fuel and increased energy efficiency. The bill directed CARB to set a state-wide GHG emission limit based on 1990 levels, to be achieved by 2020.

AB 32 requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. In December 2008, CARB adopted its Climate Change Scoping Plan: A Framework for Change (Scoping Plan), which included the state's strategies for achieving AB 32's reduction targets. These strategies are implemented with additional rules and regulations of relevance to energy analysis, such as the Advanced Clean Cars Program, the Low Carbon Fuel Standard, Title 24 building efficiency standards, and the RPS. These are discussed further below.

Enacted in 2016, Senate Bill (SB) 32 (Pavley, 2016) codifies a 2030 GHG emissions reduction goal and requires CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. Similar to AB 32, a reduction in GHG emissions typically corresponds with a reduction in energy usage as the bulk of GHGs result from the combustion of fossil fuel.

2018 Integrated Energy Policy Report Update

The 2018 Integrated Energy Policy Report Update provides an assessment of major energy trends and issues for a variety of energy sectors, as well as policy recommendations (CEC 2018b). Prepared by the California Energy Commission (CEC), this report details the key energy issues facing California and develops potential strategies to address these issues. The 2018 Integrated Energy Policy Report Update includes a discussion of several strategies to reduce climate change impacts and lessen energy consumption and recommendations for each topic. Examples include a discussion of building decarbonization, strategies to increase energy efficiency, discussion of energy equity, and the impacts of increasing the flexibility of the electricity system. The assessments and forecasted energy demand within this report will be used by the CEC to develop future energy policies.

Title 24 Building Energy Efficiency Standards

The 2016 California Green Building Standards Code, as specified in Title 24, Part 11 of the California Code of Regulations, commonly referred to as CalGreen Building Standards (CalGreen), establishes voluntary and mandatory standards to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The provisions of this code apply to the planning, design, operation, construction, replacement, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California. Examples of CalGreen provisions include reducing indoor water use, moisture-sensing irrigation systems for landscaped areas, construction waste diversion goals, and energy system inspections. CalGreen is periodically amended; the most recent 2016 standards became effective on January 1, 2017.

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods for building features such as space conditioning, water heating, lighting, and whole envelope. The 2005, 2008, and 2013 updates to the efficiency standards included provisions such as cool roofs on commercial buildings, increased use of skylights, and higher efficiency lighting; heating, ventilation, and air conditioning (HVAC); and water heating systems. Additionally, some standards focused on larger energy-saving concepts such as reducing loads at peak periods and seasons and improving the quality of such energy-saving installations. Past updates to the Title 24 standards have proven very effective in reducing building energy use, with the 2013 update estimated to reduce energy consumption in residential buildings by 25% and energy consumption in commercial buildings by 30%, relative to the 2008 standards (CEC 2012). The 2016 updates include additional high-efficiency lighting requirements, high-performance attic and walls, and higher-efficiency water and space heaters. The currently applicable 2016 standards are expected to reduce residential electricity consumption by 28% and non-residential electricity by 5% (CEC 2015). The CEC has developed and adopted 2019 standards, which will go into effect on January 1, 2020.

Given that the 2019 standards will be in effect at the time construction of the proposed project begins, at a minimum, initial phases of project building construction will be subject to the 2019 standards. Over the

course of project buildout, future Title 24 standards are likely to apply as the standards are triggered by the filing of building permit applications. Notably, the data needed to quantitatively account for the 2019 standards (or the post-2019, future standards) is not yet available at the time of preparation of this analysis, and so the 2016 standards are used in this analysis. As previously discussed, this serves to conservatively over-estimate project energy consumption.

Renewables Portfolio Standard

SB 1078 (2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to obtain at least 20% of their energy supply from renewable sources by 2017. SB 107 (2006) changed that target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expanded the state's RPS to 33% renewable power by 2020. In April 2011, Governor Brown signed SB 2X, which legislated the prior Executive Order S-14-08 renewable standard. SB 350 (2015) set an additional RPS goal of 50% renewables by 2030. SB 100 (2018) accelerated and extended again the RPS, requiring achievement of a 50% RPS by 2026 and a 60% RPS by 2030. SB 100 also established a state policy goal to achieve 100% renewables by 2045.

SB 743—Transportation Analysis under the California Environmental Quality Act

Public Resources Code Section 21099(c)(1), as codified through enactment of SB 743, was enacted with the intent to change the focus of transportation analyses conducted under the California Environmental Quality Act (CEQA). SB 743 reflects a legislative policy to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. As finalized in December 2018, amendments to the CEQA Guidelines adopted in furtherance of SB 743 establish VMT, in lieu of level of service, as the new metric for transportation analysis. Implementation of SB 743 is anticipated to improve the efficiency of transportation fuels consumption.

SB 375—Land Use Planning

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State of California's climate action goals to reduce GHG emissions through coordinated transportation and land use planning. SB 375 required CARB to establish GHG emission reduction targets (Regional Targets) for each metropolitan planning region. On September 23, 2010, CARB adopted Regional Targets applying to the years 2020 and 2035. In 2011, CARB adopted Regional Targets of 7% for 2020 and 13% for 2035 for the area under SANDAG's jurisdiction. These targets were in place through September 30, 2018. In March 2018, CARB approved updated regional targets of 15% for 2020 and 19% for 2035 for SANDAG, which will be applied by SANDAG in future planning cycles.

SB 375 requires MPOs, including SANDAG, to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve the GHG emission Reduction Targets set by CARB, primarily by reducing VMT from light-duty vehicles through development of more compact, complete, and efficient communities. SANDAG prepared San Diego Forward to fulfill this requirement, and CARB accepted SANDAG's GHG quantification demonstration for that plan (SANDAG 2015).

Clean Cars

In January 2012, CARB approved the Advanced Clean Cars Program, which established an emissions control program for cars and light-duty trucks (such as SUVs, pickup trucks, and minivans) of model years 2017–2025. When the program is fully implemented, new vehicles would emit 75% less smog-forming pollutants than the average new car sold today, and GHG emissions would be reduced by nearly 35%. This Program would help reduce fossil fuel usage for internal combustion engine powered vehicles.

Commercial Motor Vehicle Idling Regulation

In July 2004, CARB initially adopted an Airborne Toxic Control Measure (ATCM) to limit idling of diesel-fueled commercial motor vehicles (idling ATCM) and subsequently amended it in October 2005, October 2009, and December 2013. This ATCM is set forth in Title 13, California Code of Regulations, Section 2485, and requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth-equipped trucks, not idle the vehicle's primary diesel engine longer than 5 minutes at any location. This anti-idling regulation helps to reduce fuel consumption by reducing engine usage. The ATCM also requires owners and motor carriers that own or dispatch these vehicles to ensure compliance with the ATCM requirements. The regulation consists of new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. Under the new engine requirements, 2008 and newer model year heavy-duty diesel engines need to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after 5 minutes of idling or optionally meet a stringent oxides of nitrogen idling emission standard.

In-Use Off-Road Diesel Fueled Fleets Regulation

In May 2008, CARB approved the In-Use Off-Road Diesel Fueled Fleets Regulation (Off-Road Regulation), which was later amended in December 2009, July 2010, and December 2011. The overall purpose of the Off-Road Regulation is to reduce emissions of oxides of nitrogen (NO_X) and particulate matter from off-road diesel vehicles operating within California. The regulation applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles. The Off Road Regulation:

- Imposes limits on idling (i.e., fleets must limit unnecessary idling to 5 minutes), requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System, and labelled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).

The anti-idling component of this Off-Road Regulation helps to reduce fuel consumption by reducing engine usage.

Tractor-Trailer Greenhouse Gas Regulation

CARB's Tractor-Trailer Greenhouse Gas Regulation reduces the energy consumption of large trucks. CARB developed this regulation to make heavy-duty tractors more fuel efficient. Fuel efficiency is improved by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires. The tractors and trailers subject to this regulation must either use EPA's SmartWay (SmartWay) certified tractors and trailers, or retrofit their existing fleet with SmartWay verified technologies. The SmartWay certification process is part of their broader voluntary program called the SmartWay Transport Partnership Program. The regulation applies primarily to owners of 53-foot or longer box-type trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low-rolling-resistance tires. All owners, regardless of where their vehicle is registered, must comply with the regulation when they operate their affected vehicles on California highways. Besides the owners of these vehicles, drivers, motor carriers, California-based brokers, and California-based shippers that operate or use them also share in the responsibility for compliance with the regulation.

Local

Because San Diego State University is a component of the California State University, which is a state agency, the proposed project is not subject to local government planning and land use plans, policies, or regulations. However, for informational purposes, the proposed project has considered these planning documents and the project's site location within, and relationship to, each. The proposed project would be subject to state and federal agency planning documents described above, but would not be subject to regional or local planning documents such as the City of San Diego General Plan, Mission Valley Community Plan, or City municipal zoning code.

City of San Diego General Plan

The Conservation Element of the City of San Diego General Plan includes the following energy-related policies (City of San Diego 2008).

> **Policy CE-A.5:** Employ sustainable or "green" building techniques for the construction and operation of buildings.
>
> a. Develop and implement sustainable building standards for new and significant remodels of residential and commercial buildings to maximize energy efficiency, and to achieve overall net zero energy consumption by 2020 for new residential buildings and 2030 for new commercial buildings. This can be accomplished through factors including, but not limited to:
>
> - Designing mechanical and electrical systems that achieve greater energy efficiency with currently available technology
> - Minimizing energy use through innovative site design and building orientation that addresses factors such as sun-shade patterns, prevailing winds, landscape, and sun-screens
> - Employing self-generation of energy using renewable technologies
> - Combining energy efficient measures that have longer payback periods with measures that have shorter payback periods

- Reducing levels of non-essential lighting, heating and cooling
- Using energy efficient appliances and lighting.

b. Provide technical services for "green" buildings in partnership with other agencies and organizations.

Policy CE-I.3: Pursue state and federal funding opportunities for research and development of alternative and renewable energy sources.

Policy CE-I.4: Maintain and promote water conservation and waste diversion programs to conserve energy.

Policy CE-I.5: Support the installation of photovoltaic panels, and other forms of renewable energy production.

a. Seek funding to incorporate renewable energy alternatives in public buildings.
b. Promote the use and installation of renewable energy alternatives in new and existing development.

Policy CE-I.7: Pursue investments in energy efficiency and direct sustained efforts towards eliminating inefficient energy use.

Policy CE-I.10: Use renewable energy sources to generate energy to the extent feasible.

Policy CE-I.12: Use small, decentralized, aesthetically-designed, and appropriately sited energy efficient power generation facilities to the extent feasible.

City of San Diego Energy Strategy for a Sustainable Future

The City of San Diego Environmental Services Department has taken a leadership role to advance policies and practices that support a more sustainable future. In June 2009, the department published its Energy Strategy for a Sustainable Future, which outlines six objectives to achieve more sustainable generation and use of energy, as follows (City of San Diego 2009):

- Energy Conservation – All City employees will be aware of and implement energy conservation measures by 2010.
- Energy Efficiency – Reduce energy use 10% by 2012, using 2000 as a baseline.
- Renewable Energy – Increase megawatts of renewable energy used at City facilities to 17 by 2012, and to 25 by 2020.
- Management of SDG&E Energy Bills – Continue the use of the Electronic Data Interchange.
- Policy Development and Implementation – Guide City efforts by institutionalizing policies and programs that increase energy conservation, efficiency, and the use of renewable energy.
- Leverage Resources – Ensure that state and federal funds are leveraged to the extent possible with existing programs such as CEC loans and the California Public Utilities Commission Partnership funds.

City of San Diego Climate Action Plan

The City of San Diego's Climate Action Plan (CAP) and CAP Checklist are the guiding documents that will be used to demonstrate consistency with the City's energy goals (City of San Diego 2015 and 2017). The CAP identifies five strategies to address GHG emissions. Of these five strategies, three have direct implications to the energy demand of the proposed project: 1. Energy and Water Efficient Buildings, 2. Clean and Renewable Energy, and 3. Bicycling, Walking, Transit and Land Use. Applicable actions within each of these strategies are expected to reduce the overall energy demand of the proposed project:

- Strategy 1: Energy and Water Efficient Buildings
  - Residential Energy Conservation and Disclosure Ordinance
- Strategy 2: Clean and Renewable Energy
  - Community Choice Aggregation Program or Another Program
- Strategy 3: Bicycling, Walking, Transit and Land Use
  - Mass Transit
  - Commuter Walking
  - Commuter Biking
  - Promote Effective Land Use to Reduce Vehicle Miles Travelled

These actions support the overarching goals that the City is striving to achieve. The CAP Checklist provides more targeted guidance to evaluate a project's consistency with the applicable CAP strategies and actions. The targeted guidance that impacts energy include:

- Strategy 1: Energy and Water Efficient Buildings
  - Cool/Green Roofs
- Strategy 2: Clean and Renewable Energy
  - The CAP Checklist does not provide additional targeted guidance for this strategy.
- Strategy 3: Bicycling, Walking, Transit and Land Use
  - Electric Vehicle Charging
  - Bicycle Parking Spaces
  - Designated Parking Spaces
  - Transportation Demand Management Program

Mission Valley Community Plan

The Mission Valley Community Plan is intended to be a blueprint for future development in the Mission Valley Community of San Diego, where the proposed project is located. The final draft of the Mission Valley Community Plan Update was released on May 31, 2019 (City of San Diego 2019). The Mission Valley Community Plan Update contains Design Guidelines and Policies for Development to implement the City's CAP, maximize transit ridership, and increase mobility options, among others. While the draft Mission Valley Community Plan Update has not yet been adopted by the City of San Diego, it is considered in this analysis.

4.5.3 Significance Criteria

The significance criteria used to evaluate the project impacts to energy are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the project would:

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

4.5.4 Impacts Analysis

Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Project construction would begin in 2020, with full buildout expected in 2037. Construction of the proposed project would result in electricity demand, due to the use of power tools (e.g., drills). However, this electricity demand is expected to be supplied by generator sets powered by fuels; thus, no additional electricity is required. (Generator sets are comprised of a generator and diesel engine used to produce power off grid.) Construction of the proposed project also is not anticipated to require natural gas. As such, electricity and natural gas related to construction of the proposed project are not discussed further.

Construction of the proposed project would require the use of transportation fuels, including gasoline and diesel used in construction equipment, hauling trucks, and construction worker vehicles. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction. For purposes of this analysis, heavy-duty construction equipment and haul trucks associated with construction activities would use diesel fuel, and construction workers would primarily use gasoline-powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of construction. CalEEMod was used to estimate construction equipment usage, and results are included in the appendices to the Air Quality Technical Report and Greenhouse Gas Emissions Technical Report for the proposed project (Appendices B and K, respectively). Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The estimated diesel fuel usage from off-road construction equipment totals 2,318,597 gallons of diesel over the course of the proposed project construction period as shown in Table 4.5-1.

Table 4.5-1. Construction Off-Road Equipment Fuel Consumption

Year	Diesel Consumption (gallons/year)
2020	*198,562*
2021	*270,031*

Table 4.5-1. Construction Off-Road Equipment Fuel Consumption

Year	Diesel Consumption (gallons/year)
2022	*687,069*
2023	*84,710*
2024	*87,958*
2025	*111,681*
2026	*90,982*
2027	*73,801*
2028	*81,675*
2029	*129,265*
2030	*135,380*
2031	*114,100*
2032	*62,819*
2033	*59,522*
2034	*53,151*
2035	*47,639*
2036	*23,884*
2037	*6,371*
Total	**2,318,597**

Source: See Table 4-1 of the Energy Technical Report (Appendix 4.5-1).

This analysis assumes that implosion would be used for SDCCU Stadium demolition. If implosion is not used, some additional pieces of off-road construction equipment would be required during the demolition phase. However, total fuel usage from all off-road construction equipment over the entire construction period (2020-2037) is expected to be similar to those presented in Table 4.5-1.

Fuel consumption from worker and vendor trips were 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. Worker vehicles are assumed to be gasoline-fueled, and vendor/hauling vehicles are assumed to be diesel-fueled. Estimated fuel usage totals 202,643 gallons of gasoline and 623,739 gallons of diesel over the course of the proposed project construction period as shown in Table 4.5-2.

Table 4.5-2. Construction On-Road Equipment Fuel Consumption

Year	Gasoline Consumption(gallons/year)	Diesel Consumption (gallons/year)
2020	*20,008*	*207,854*
2021	*32,544*	*188,888*
2022	*18,550*	*99,166*
2023	*9,869*	*3,596*
2024	*12,611*	*10,556*
2025	*16,952*	*18,263*
2026	*15,609*	*18,158*
2027	*11,552*	*13,495*

Table 4.5-2. Construction On-Road Equipment Fuel Consumption

Year	Gasoline Consumption(gallons/year)	Diesel Consumption (gallons/year)
2028	*6,500*	*4,942*
2029	*10,586*	*9,878*
2030	*8,936*	*9,843*
2031	*7,006*	*7,369*
2032	*6,051*	*4,952*
2033	*9,198*	*9,736*
2034	*8,252*	*9,722*
2035	*6,389*	*7,321*
2036	*1,238*	*0*
2037	*795*	*0*
Total	**202,643**	**623,739**

Source: See Table 4-2 of the Energy Technical Report (Appendix 4.5-1).

There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies). Further, the construction plan is designed to minimize fuel usage, for example and where possible, by re-using demolition debris on site for fill and thereby avoiding hauling trips associated with (i) disposal of debris and (ii) importing soil needed for fill.

For information purposes, Table 4.5-3 shows the proposed project's gasoline and diesel consumption as compared to the City's and California's demand for those same resources, over the proposed project's anticipated construction duration (approximately 209 months). For comparison, based on 2017 consumption, construction of the proposed project would equate to 0.71% of the total amount of diesel and less than 0.002% of the total amount of gasoline that would be used citywide during the course of the construction period. Construction of the proposed project would equate to less than 0.005% of the total amount of diesel and less than 0.0001 % of the total amount of gasoline that would be used statewide during the course of the construction period.

Table 4.5-3. Construction Energy Resource Summary

Energy Resource	Construction[1]	City of San Diego		California	
		Consumption	*Project's Contribution*	*Consumption*	*Project's Contribution*
Gasoline (gallons)	202,643	10,422,773,921	0.002%	279,312,898,878	0.00%
Diesel (gallons)	2,942,336	414,528,739	0.710%	55,330,515,126	0.005%

Source: See Table 6-3 of the Energy Technical Report (Appendix 4.5-1).

Additionally, the construction activities would comply with state requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and

off-road equipment would be limited to 5 minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation, and trucks would be compliant with the requirements of the Tractor-Trailer Greenhouse Gas Regulation.

Based on the above analysis, fuel use during construction would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Operations

Electricity

Operation of the proposed project would result in electricity demand for the proposed new buildings. Table 4.5-4 below sets forth the annual electricity usage for the existing Stadium (based on a review of meter readings), as well as for the proposed project (based on the CalEEMod default for land uses in climate zone 13, assuming regulatory requirements).

Table 4.5-4. Operational Electricity Consumption

Inventory Year	Electricity Demand (kWh/year)	Service Population (SP)	Electricity per SP (kWh/SP-year)
Baseline	4,660,920	400	11,652
Project – Stadium Only	5,341,540	570	9,371
Project without Design Features	72,720,415	14,946	4,866
Project with Design Features[4]	61,900,937	14,946	4,142

Source: See Table 4-3 of the Energy Technical Report (Appendix 4.5-1).

As shown in Table 4.5-4, operational electricity would increase from the baseline condition (4,660,920 kWh/year) to the proposed project condition (61,900,937 kWh/year). Of note:

- The project's efficiency (as expressed via an electricity consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include electricity saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project would install on-site rooftop solar PV, which is expected to offset approximately 14.9% of the electricity demands of the proposed project. Other electricity saving features of the project, such as the proposed project's consistency with LEED Version 4 design standards, have not been quantified, thereby likely leading to a conservative overestimation of project energy consumption.
- As previously discussed, the energy usage calculation for the proposed project conservatively reflects application of the 2016 Title 24 standards, even though the 2019 Title 24 standards and subsequent updates thereto will apply given the proposed project's construction timeline and would serve to further reduce project energy consumption.

Further, as discussed in connection with the plan-level consistency analysis provided below, the proposed project would implement measures identified by other plans and policies to reduce energy usage. These plans include the City of San Diego CAP and Draft Mission Valley Community Plan Update, which include measures and design guidelines to increase energy efficiency in the region.

For additional context and comparison, Table 4.5-5 depicts that operation of the proposed project would equate to less than 0.8% of the total electricity demand citywide and less than 0.03% of the total electricity demand statewide based on 2017 consumption.

Table 4.5-5. Operation Energy Resource Summary

Energy Resource	Operation[1]	City of San Diego		California	
		Consumption	*Project's Contribution*	*Consumption*	*Project's Contribution*
Electricity (kWh/year)	61,900,937	7,738,649,000	0.800%	288,613,480,216	0.021%
Natural Gas (kBtu/year)	102,012,852	38,390,822,400	0.266%	1,256,804,127,406	0.008%
Gasoline (gallons/year)	4,120,682	570,941,352	0.722%	15,540,154,774	0.027%
Diesel (gallons/year)	1,014,587	67,262,101	1.508%	3,089,833,627	0.033%

Notes: kWh = kilowatt hours; kBtu = kilo British thermal units.

Source: See Table 6-4 of the Energy Technical Report (Appendix 4.5-1).

In 2017, total in-state electric generation, not including small-scale solar installations, was 206,336 GWh, and energy imports accounted for 29% of the statewide power mix (CEC 2018a). The CEC estimates that statewide energy demand will increase to 354,209 GWh in 2030 (CEC 2018c). The proposed project's anticipated electricity usage of 61,901 megawatt hours in 2037 is approximately 0.02% of the projected statewide demand in 2030. Given that the annual growth rate for the state is 1.27%, the anticipated statewide energy demand for 2037 will likely be greater than that in 2030; thus, the proposed project's relative percentage contribution to the statewide energy demand would be even less.

The proposed project's electricity use projections also represent a small percentage of regional estimates for SDG&E. The CEC estimates that SDG&E energy demand will increase to 26,402 GWh in 2030 (CEC 2018d). The proposed project's anticipated electricity usage of 61,901 megawatt hours in 2037 is approximately 0.23% of the projected SDG&E planning area demand in 2030. Overall, the proposed project's projected electricity demand is consistent with, and a small percentage of, state and regional projections.

The proposed project was designed to incorporate energy efficiency measures and allow the proposed project to meet both peak and base demand. Specific aspects of the proposed project's energy system design, including solar PV, allow for renewable or sustainable options for meeting peak demands, as discussed above. The inclusion of solar PV as a source of renewable energy would reduce the demand for electricity generation from the grid resources, particularly during peak times when energy demand is the highest and solar energy potential is also the highest. In 2016, California's peak grid demand was 46,193 megawatts. SDG&E's peak grid demand was 4,294 megawatts in 2016 and is expected to increase to 5,429 megawatts in 2026. The proposed project will have a relatively negligible effect on statewide and SDG&E peak demands.

Based on the above analysis, electricity consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Natural Gas

Operation of the proposed project requires natural gas, mainly for building heating and hot water. Natural gas is imported for on-site use and is estimated using CalEEMod defaults based on averages for the climate zone for the existing conditions, as well as proposed project buildout. Natural gas usage was estimated to be 1,822,990 kBtu for the existing Stadium (based on a review of meter readings) and 102,012,852 kBtu for the proposed project (based on use of CalEEMod parameters) as shown in Table 4.5-6. Of note:

- The project's efficiency (as expressed via a natural gas consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include natural gas saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project would limit the installation of natural gas-burning fireplaces to no more than 5% of the total number of residential units. Other energy saving features of the project, such as the proposed project's consistency with LEED Version 4 design standards, have not been quantified, thereby likely leading to a conservative overestimation of project energy consumption.
- As previously discussed, the energy usage calculation for the proposed project conservatively reflects application of the 2016 Title 24 standards, even though the 2019 Title 24 standards and subsequent updates thereto will apply given the proposed project's construction timeline and would serve to further reduce project energy consumption.

Table 4.5-6. Natural Gas Consumption

Inventory Year	Natural Gas Use (kBtu/year)	Service Population (SP)	Natural Gas Use per SP (kBtu/SP-year)
Baseline	1,822,990	400	4,557
Project – Stadium Only	4,143,830	570	7,270
Project	102,012,852	14,946	6,825

Notes: kBtu = kilo British thermal units; SP = Service Population; kBtu/SP-year = kilo British thermal units per service population per year.
Source: See Table 4-4 of the Energy Technical Report (Appendix 4.5-1).

For comparison, based on 2017 consumption, operation of the proposed project would equate to less than 0.3% of the total natural gas demand citywide and less than 0.01% of the total natural gas demand statewide (Table 4.5-5).

Based on the above, natural gas consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Fuel Usage

Operation of the proposed project would require the use of fuel due to students, faculty, staff, attendees, residents, workers, and delivery vehicles associated with the SDSU Mission Valley campus. Activity data (number of trips and/or VMT) for existing conditions and the proposed project was provided by Fehr & Peers. Data from Fehr & Peers is provided in the Transportation Impact Analysis (Appendix 4.15-1). Fuel usage was estimated using an average mpg obtained from EMFAC2014 for the fleet mix corresponding to the vehicle category and fuel type (gasoline or diesel).

Mobile gasoline fuel usage was estimated to be 198,367 gallons/year for the existing condition and 4,120,682 gallons/year for the proposed project buildout, with the totals shown in Table 4.5-7. Of note:

- The project's efficiency (as expressed via a fuel consumption per service population metric) is improved when compared to the existing condition.
- The proposed project would include transportation fuel-saving features, some of which have a quantifiable impact on the energy demand. For example, the proposed project's TDM Program is expected to reduce VMT and the corresponding consumption of gasoline by 14.41%. Additionally, the project's EV-ready spaces and installation of EV charging stations will facilitate the use of newer vehicle technologies that do not rely on traditional transportation fuels, such as gasoline and diesel.
- The energy usage calculation for the proposed project conservatively reflects existing regulatory programs, and does not account for anticipated improvements in fuel efficiency and conversion of the vehicle fleet to zero emission vehicles.
- Existing transit service near the project site includes light rail/trolley and bus services provided by MTS. MTS provides bus and trolley service within the Mission Valley Community, including an existing trolley stop at the south edge of the proposed project site. The Trolley Green Line provides service along the San Diego River corridor, and MTS bus routes 14 and 18 provide service along Qualcomm Way, Fairmount Avenue, Mission Gorge Road, Alvarado Canyon Road, Camino del Rio North, Ward Road, Rancho Mission Road, and Friars Road.

  Numerous state policies for the reduction of air quality, GHG, and energy impacts support locating new development, like the proposed project, in infill areas served by transit. The infill location allows the City of San Diego specifically to accommodate existing and projected population and employment growth within a developed, urbanized area. Urban areas served by multimodal transit options can result in a reduced dependence on automobiles, therefore reducing associated VMT and transportation energy usage.

Table 4.5-7. Gasoline Consumption

Inventory Year	VMT (miles/year)	Gasoline Consumption (gallons/year)	Service Population (SP)	Consumption per SP (gallons/SP-year)
Baseline	4,325,858	198,367	400	496
Project	175,724,827	5,263,459	14,946	352
Project with Design Features	137,572,308	4,120,682	14,946	276

Source: See Tables 4-5 and 6-2 of the Energy Technical Report (Appendix 4.5-1).

The proposed project also is expected to include one diesel generator that would provide emergency lighting and power for the new multipurpose Stadium in the event of a power failure. Diesel fuel usage results from generator operation for testing and maintenance, and for emergency operation. Activity data (hours of operation, including some emergency usage) for stationary source diesel fuel consumption was based on 1 hour per week of operation for testing and maintenance emergency usage. Diesel fuel usage from mobile and stationary sources was estimated to be 23,476 gallons/year for the existing condition and 1,014,587 gallons/year for the proposed project buildout as shown in Table 4.5-8.

Table 4.5-8. Diesel Consumption

Inventory Year	Diesel Consumption (gallons/year)	Service Population (SP)	Diesel Consumption per SP (gallons/SP-year)
Baseline	23,476	400	59
Project	1,014,587	14,946	68

Source: See Table 4-6 of the Energy Technical Report (Appendix 4.5-1).

There are no unusual project characteristics that would require diesel consumption that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies).

For comparison, based on 2017 consumption, operation of the proposed project is approximately 1.5% of the total diesel and 0.7% of the total gasoline that would be used citywide each year. Operation of the proposed project is less than 0.04% of the total diesel and less than 0.03% of the total gasoline that would be used statewide each year (Table 4.5-5).

Vehicle use for the proposed project also has been evaluated pursuant to the technical advisory the Governor's Office of Planning and Research published under SB 743, which created a process to change the methods used for transportation impacts analyses under CEQA from focusing on level of service to VMT. (See 14 CCR 15064.3.) VMT has a direct correlation to fuel usage. The SB 743 VMT analysis can be referenced in Section 4.15, Transportation, as well as Section 13 of the Transportation Impact Analysis (Appendix 4.15-1).

As described further in the SB 743 VMT Analysis, the VMT generation for the proposed project's workers and residents represents a reduction compared to the regionwide average VMT for those populations in the absence of the proposed project. The primary reasons for this reduction are the TDM Program, the proximity of the public transit station, and the mixed-use campus nature of the proposed project. Reduced VMT results in reduced mobile fuel use per worker and per resident as compared to the regionwide average without the proposed project.

Based on the above analysis, transportation fuel consumption during operation would not be wasteful, inefficient, or unnecessary, and impacts would be **less than significant**.

Summary

Despite the projected increase in electricity, natural gas, and fuel usage compared to the baseline for the project site, the overall energy usage requirements expressed per service population decrease with implementation of the proposed PDFs discussed above. This conclusion is reached even while projecting forward electricity and natural gas demand based on current energy use profiles. This is a conservative estimate because anticipated building code updates will allow for further improvements in efficiency to be realized. Even without incorporating these additional energy efficiency improvements, resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and shows efficiencies gained on a per-service population basis. Additionally, the proposed project would develop residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus) and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. The proposed project's potential impacts with respect to energy requirements and energy use efficiencies are **less than significant**.

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would comply with any applicable state plans for renewable energy or energy efficiency to the extent required by law. Further, the proposed project is consistent with the renewable energy and energy efficiency provisions of the City of San Diego's CAP and draft Mission Valley Community Plan. These plans are described in more detail in Section 4.5.2, and the relevant provisions of each plan are listed in Table 4.5-9. The proposed project has been evaluated for consistency with the relevant provisions and has been concluded to be consistent. The assessment for individual local plan measures is found in Table 4.5-9. Additionally the proposed project has been evaluated for consistency with state plans in Table 4.5-10 and has been concluded to be consistent**.** As such, impacts are **less than significant**.

Would the project result in a cumulative impact to energy?

The proposed project would result in an incremental increase in demand for electricity, natural gas, and fuel usage. However, despite the proposed projected increase in energy as compared to the baseline, the overall energy use requirements expressed per service population decrease with the proposed project PDFs discussed above. This conclusion is reached even while projecting forward electricity and natural gas demand based on current energy use profiles. This is a conservative estimate because anticipated building code updates will allow for further improvements in efficiency to be realized. Even without incorporating these additional energy efficiency improvements, resulting energy use from implementation of the proposed project is not wasteful or unnecessary, and shows efficiencies gained on a per-service population basis.

The proposed project also would incorporate several PDFs as described in Section 4.5.1. For example, the proposed project's overall energy demand will be reduced by incorporating operable windows, building materials that serve as insulators/conductors, and efficient HVAC systems. The proposed project's consistency with LEED Version 4 at a Silver or better certification may also drive additional energy efficiency in design. The proposed project has further committed to installing on-site rooftop solar PV, which is expected to offset approximately 14.9% of the electricity demands of the proposed project. The proposed project would include a TDM Program to reduce its transportation energy use requirements. Lastly, the proposed project would develop campus residential and nonresidential land uses in an infill setting that is served by multimodal transportation options (trolley and bus) and would further enhance other multimodal options by designing the site to encourage pedestrian- and bicycle-oriented connectivity. Therefore, the proposed project is not anticipated to create a significant local or regional demand on electricity that would result in a cumulative impact. The proposed project's potential cumulative impacts with respect to energy requirements and energy use efficiencies are **less than significant**.

4.5.5 Summary of Impacts Prior to Mitigation

Impacts to energy would be **less than significant**.

4.5.6 Mitigation Measures

Impacts to energy would be **less than significant**, and no mitigation is required.

4.5.7 Level of Significance After Mitigation

Impacts to energy would be **less than significant,** and no mitigation is required.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
City of San Diego's Mission Valley Community Plan			
DG-27	Solar Access and Energy Conservation	Employ climate-appropriate design strategies to allow for passive solar access and energy-efficient installations, including: - Allowing for adequate access to light and air so that daylight is able to reach all living spaces for part of the day, and adequate ventilation is provided when windows are open. Prioritize south-facing windows and private open space. - Siting building so that plazas and other public spaces will not be kept in shadows at all times and will not experience excessive wind conditions. - Locating parking areas with large paved surfaces to the east and north of adjacent buildings to reduce solar reflection on buildings. - Placing evergreen trees on the west side of buildings to provide protection from prevailing winds.	**Consistent.** The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which contributes to the energy conservation noted in this measure. As to the building and site orientation recommendations contained in this measure, the layout of the proposed project's campus development areas has been designed to maximize the unique infill opportunity presented at this Mission Valley location. The proposed project includes a compatible mix of land uses that would intersect in a vibrant campus setting.
DG-28	Energy	Consider clustering buildings to use a common heating/cooling source.	**Consistent.** The proposed project consists of an SDSU Mission Valley campus, which locates buildings in close proximity. The design of the site will ensure the optimum heating and cooling systems are incorporated. Thus, the nature of the proposed project complies with this measure.
DG-34	Roof Surfaces	Consider locating sloped roof surfaces facing the south, and at an angle that can accommodate solar panel or film installation for renewable energy generation or centralized solar hot water heating.	**Consistent.** The proposed project would install solar PV panels throughout the development areas, and roof surfaces with appropriate attributes for solar generation would be selected. For more information on the attributes of the solar design PDF, please see Appendix 4.5-1.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-40	Operable Windows	Wherever applicable, provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation. If mechanical systems are necessary, use energy-efficient and low emission heating, ventilation, and air conditioning (HVAC) systems.	**Consistent.** Project development areas would maximize natural ventilation. Mechanical systems also would be designed and built according to all applicable building code and energy efficiency standards (see, e.g., 24 CCR, Parts 6 and 11).
DG-45	Energy and Building Materials	Use building materials which will act as insulators or conductors, depending on energy needs.	**Consistent.** Project development areas would meet the applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), including requirements for building materials.
DG-62	Sustainable Materials	Where possible, use sustainable building materials to the maximum extent feasible. Incorporate recycled, renewable, sustainable, and non-toxic/low-VOC (volatile organic compound) materials. Use of locally harvested and/or manufactured materials is desired.	**Consistent.** The proposed project would comply with applicable standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which includes requirements for building materials. In addition, the proposed project would comply with applicable San Diego Air Pollution Control District rules governing volatile organic compound content of coatings. Where applicable, compliance with the Buy Clean California Act (AB 262, 2017) also would be required to aid in the reduction of GHG emissions associated with the manufacture and transport of products used in public works projects.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-63	Sustainable Landscaping	Provide on-site landscaping improvements that minimize heat gain and provide attractive and context sensitive landscape environments, by: - Building roof gardens, eco-roofs, or other vegetated roof systems to help reduce the solar heat gain of building roofs and to serve as shared open space. - Minimizing impervious surfaces that have large thermal gain.	**Consistent.** The proposed project integrates extensive parks and landscaping, including the planting of new, on-site trees. (See EIR Chapter 2, Project Description.) Further, project design parameters do not preclude the use of vegetated roofing systems; the installation of such systems would be determined on a building-by-building basis, following consideration of site orientation, building use, available rooftop space (following PV installation), and other factors. In addition, the proposed project would comply with applicable requirements of the CalGreen Building Standards Code (24 CCR, Part 11), which address the reduction of impervious surfaces. Site development is compact by design, in order to maximize the available infill opportunity. Impervious surfaces would be utilized where needed, and complemented by the proposed extensive park areas along the San Diego River.
DG-64	Water Efficiency and Conservation	Install water saving appliances and systems such as grey water systems, moisture-sensitive irrigation rainwater cisterns, and low-flow toilets and faucets. Any exterior systems should be integrated into building design.	**Consistent.** The proposed project would comply with applicable requirements of the California Building Code (24 CCR, Parts 6 and 11), and the City of San Diego's CAP Checklist, which include requirements for water management, efficiency, and conservation.
DG-67	Energy Generation	Integrate energy generation and sustainability such as solar, wind, geothermal or other technologies into the overall building design consistent with the architectural design.	**Consistent.** The proposed project would install solar PV panels through the development areas. For more information on the attributes of the solar design PDF, please see Appendix 4.5-1.
DG-68	Carbon Sequestration	Incorporate new trees into site plans that have the potential for storage and sequestration of high levels of carbon.	**Consistent.** The proposed project includes planting of new trees (approximately 3.5 times the number of new trees compared to what currently exists at the site).

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
DG-69	Zero Net Energy Buildings	Strive for zero net energy in a building design.	**Consistent.** Project development areas would incorporate energy efficiency measures in compliance with the version of the California Building Code (24 CCR, Parts 6 and 11) applicable at the time of building permit application, and incorporate solar PV panels beyond what is required by existing regulatory standards. It also is noted that the 2019 Title 24, Part 6 standards, which go into effect on January 1, 2020, include zero net electricity requirements for low-rise residential buildings (three stories or less).
DG-73	Mobility Hubs	Design areas around transit stations to provide for a range of services that can improve first-last mile connections. This includes drop-off/pick-up areas for ride-hailing and shuttle services, space for scooter- and bike share storage, parking spaces dedicated to car sharing services, charging stations, and package pick-up areas.	**Consistent.** The proposed project site is located near the existing, underutilized MTS Trolley Green Line Stadium Station, and would provide an enhanced pedestrian connection to this station. The proposed project also would incorporate connectivity as part of the project design, which includes establishing a sustainable, walkable, and transit-oriented campus with enriched pedestrian spaces, walking paths and trails, as well as EV charging stations. The proposed project's TDM Program also includes elements such as bicycle racks and secure bicycle parking, showers and lockers for employees, a transportation corridor and an information-sharing website and kiosks, coordination with SANDAG's iCommute program, guaranteed rides home, unbundled residential parking, and metered and time-limited on-street parking.
RES-4	Residential Development	Affordable housing is encouraged to be built on site.	**Consistent.** As contemplated by SDMC Section 22.0908, the proposed project would comply with the City's affordable housing requirements by building the required affordable units on-site.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
GBP-1	Green Building Practices	The use of sustainable building practices is highly encouraged. New buildings should strive to qualify for LEED accreditation.	**Consistent.** The proposed project would comply with applicable green building practices set forth in the California Building Code (24 CCR, Parts 6 and 11). Additionally, individual buildings within the proposed project development area would be designed to achieve LEED Version 4 equivalent standards (Silver minimum); and the proposed project, as a whole, would be designed to achieve LEED-Neighborhood Design Version 4 equivalent standards (Silver minimum).
GBP-3	Green Building Practices	New development should not inhibit the solar access of neighboring buildings to the maximum extent practical.	**Consistent.** The proposed project is designed to not inhibit solar access of neighboring buildings to the maximum extent practical.
BIC-1	Bicycling	New development required to build 10 long-term bicycle parking spaces should provide a sheltered Bike Kitchen – a place to use tools and repair bicycles.	**Consistent.** The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the City of San Diego Municipal Code. The proposed project also would include a place to use tools and repair bicycles.
BIC-3	Bicycling	Access plans for new development should clearly identify ingress and egress for bicycles, with minimum interaction with vehicles.	**Consistent.** The proposed project incorporates bicycle paths and ingress/egress points with wayfinding to minimize interaction with vehicles.
BIC-4	Bicycling	New development should provide connections to bicycle trails and routes per the San Diego Regional Bicycle Plan. Open spaces should also be located to abut or provide direct access to bicycle facilities.	**Consistent.** The proposed project incorporates bicycle paths and ingress/egress points. In addition, a hike-and-bike trail would be located throughout the open space portions of the proposed project.
PRK-6	Parking	Parking areas should be distributed throughout a project site to avoid large contiguous parking areas and to integrate landscaping. Each parking area should include no more than 30% of the project's parking spaces.	**Consistent.** The proposed project integrates landscaping into the project site and disperses parking throughout the site. Notably, many of the parking areas consist of multilevel parking garages that are consolidated, allowing additional space for landscaping, paseos, and other open areas.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
PRK-8	Parking	A minimum of 10% landscaping of the parking lot area is encouraged.	**Consistent.** The proposed project integrates landscaping into the project site, including in the parking areas.
SMC-2	Smart Cities	For energy efficiency and to minimize light pollution, lighting with adaptive controls should be considered for new and infill development.	**Consistent.** The proposed project would include adaptive lighting controls, where appropriate and feasible, in order to maximize energy efficiency and minimize light pollution. In addition, the proposed project would comply with applicable energy efficiency standards set forth in the California Building Code (24 CCR, Parts 6 and 11), which address lighting energy efficiency.
SMC-1	Smart Cities	Consider providing priority parking and charging stations (preferably solar) to promote sustainable practices and accommodate the use of Electric Vehicles (EVs), including smaller short-distance neighborhood electric vehicles.	**Consistent.** The proposed project would include 503 EV-ready parking spaces, of which 252 spaces are equipped with EV charging stations.
PRK-4	Parking	New development should consider designating priority electric vehicle and zero emissions vehicle parking.	**Consistent.** The proposed project would designate certain parking spaces in prioritized locations for electric vehicles and zero emission vehicles.
PRK-2	Parking	New development should consider unbundled parking to offset development costs and encourage use of alternative transportation modes.	**Consistent.** The proposed project's TDM Program requires that residential parking be unbundled from unit counts.
TDM-1	Transportation Demand Management	New development considering community circulators as a TDM measure should evaluate a coordinated effort with additional properties to expand the service and access more destinations.	**Consistent.** This measure is not applicable because the proposed project does not include a community circulator as a part of its TDM Program. However, the proposed project's TDM Program includes several other measures that enhance mobility throughout the project site.
TDM-2	Transportation Demand Management	New development should consider developing and implementing an approved TDM Plan designed to reduce peak period automobile use and lower the minimum parking requirement. Reference San Diego Municipal Code Chapter 14, Article 2, Division 5.	**Consistent.** The proposed project has developed a TDM Program that includes various measures aimed at reducing peak period single-occupancy automobile use and reducing parking needs.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
TDM-3	Transportation Demand Management	New development should incorporate mobility hub features such as EV chargers, rideshare pick-up/drop-off space, bicycle parking, and transit information.	**Consistent.** The proposed project will provide EV chargers in the campus educational, residential, retail, office, and Stadium parking areas, as well as rideshare pick-up/drop-off space to serve these uses. Residential bicycle storage will be provided in residential parking areas, and long-term and short-term bicycle parking will be available for public use at various locations in the site. Transit information will be provided by the proposed project's Transportation Coordinator and will be made available to all project employees and residents.
TDM-4	Transportation Demand Management	New development should designate visible space along the property frontage to allow for staging of shared vehicles, bikes, and scooters.	**Consistent.** Visible space for the staging of shared vehicles, bikes, and scooters will be provided along the proposed project frontage and along the project shared-use path that connects the project's land uses and the Trolley Station, as well as, other locations throughout the site as needed.
TDM-5	Transportation Demand Management	New development should consider participating in existing TDM programs, including but not limited to those overseen by SANDAG and MTS, in order to: • Encourage rideshare and carpool for major employers and employment centers. • Promote car/vanpool matching services. • Continue promotion of SANDAG's guaranteed ride home for workers who carpool throughout Mission Valley. • Provide flexible schedules and telecommuting opportunities for employees.	**Consistent.** The proposed project's Transportation Coordinator will encourage residents and employees to participate in rideshare and carpool services and promote SANDAG's guaranteed ride home program. Additionally, the Transportation Coordinator will encourage employers to provide flexible schedules and telecommuting opportunities.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
TDM-6	Transportation Demand Management	New development should provide flexible curb space in commercial/retail and residential areas to meet the needs of shared mobility services and the changing demands of users.	**Consistent.** Flexible curb space will be provided in the commercial/retail and residential areas of the proposed project in order to accommodate Transportation Network Company loading and unloading operations, deliveries, and other loading activities.
TDM-7	Transportation Demand Management	New development should post information related to available transit service and bicycle infrastructure as a means to encourage use of alternative transportation modes.	**Consistent.** As discussed in relation to measure TDM-3, the proposed project's Transportation Coordinator will provide information related to available transit service and bicycle infrastructure to all residents and employees.
TDM-8	Transportation Demand Management	Employers should consider providing "parking cash out" options to employees—option for employees to receive the cash value of employer-paid parking subsidies in lieu of a parking spot—as an alternative to providing free or subsidized parking or transit passes.	**Consistent.** Employers that rent office space on the project site will be educated about this program by the Transportation Coordinator and can decide to participate in either of the programs if they choose to do so.
City of San Diego's CAP Checklist			
Strategy 1	Energy and Water Efficient Buildings [Roofing]	• Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR • Would the project include a combination of the above two options?	**Consistent.** Project development areas would comply with one, both or a combination of the roofing options provided in this strategy, upon CSU Building Permit issuance and pursuant to the *SDSU Mission Valley Campus Master Plan Design Guidelines*.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
Strategy 1	Energy and Water Efficient Buildings [Residential: Plumbing fixtures and fittings]	Residential buildings: • Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; • Standard dishwashers: 4.25 gallons per cycle; • Compact dishwashers: 3.5 gallons per cycle; and • Clothes washers: water factor of 6 gallons per cubic feet of drum capacity?	**Consistent.** The proposed project's residential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, upon CSU Building Permit issuance and pursuant to the SDSU Mission Valley Campus Master Plan Design Guidelines.
Strategy 1	Energy and Water Efficient Buildings [Non-residential: Plumbing fixtures and fittings]	Non-residential buildings: • Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and • Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)?	**Consistent.** The proposed project's nonresidential campus areas would comply with the maximum flow rates for plumbing fixtures and appliances provided in this strategy, as a condition of building permit issuance.
Strategy 3	Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of 17 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents?	**Not Applicable.** This strategy is not applicable because the proposed project includes more than 17 dwelling units.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis
Strategy 3	Bicycling, Walking, Transit, & Land Use [EV Chargers]	Multiple-family projects of more than 17 dwelling units: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents?	**Consistent.** The proposed project would provide a minimum of 85 EV-ready spaces with charging stations in the residential development areas.
Strategy 3	Bicycling, Walking, Transit, & Land Use [EV Chargers]	Non-residential projects: Of the total required listed cabinets, boxes or enclosures, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use?	**Consistent.** The proposed project would provide a minimum of 167 EV-ready spaces with charging stations in the non-residential campus areas.
Strategy 3	Bicycling, Walking, Transit & Land Use [Bicycle Parking]	Bicycle Parking Spaces: Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?	**Consistent.** The proposed project would meet, and exceed, the number of bicycle parking spaces per dwelling unit specified in the San Diego Municipal Code.
Strategy 3	Bicycling, Walking, Transit & Land Use [Shower facilities]	If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table?	**Consistent.** The proposed project's nonresidential campus areas would provide changing/shower facilities as required by the referenced CalGreen provision, as a condition of building permit issuance.
Strategy 3	Bicycling, Walking, Transit & Land Use [Parking spaces]	Designated Parking Spaces: If the project includes a nonresidential use in a TPA [Transit Priority Area], would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the table?	**Consistent.** The proposed project's nonresidential campus areas would provide designated parking for a combination of the specified vehicles, as a condition of building permit issuance.

Table 4.5-9 Local Plan-Level Consistency Analysis

Measure/Strategy		Description	Consistency Analysis

Strategy 3	Bicycling, Walking, Transit & Land Use [TDM]	Transportation Demand Management Program. If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes the components listed in the CAP Checklist?	**Consistent.** A TDM Program has been designed for the proposed project. The TDM Program includes:
			• Land Use Diversity
			• Neighborhood Site Enhancement
			  ○ New Bicycle Facilities
			  ○ Dedicated Land for Bicycle/Multi-Use Trails
			  ○ Bicycle Parking
			  ○ Showers and Lockers in Employment Areas
			  ○ Increased Intersection Density
			  ○ Traffic Calming
			  ○ Car Share Service Accommodations
			  ○ Enhanced Pedestrian Network
			• Parking Policy and Pricing
			  ○ Unbundled Residential Parking
			  ○ Metered On-Street Parking
			  ○ Reduced Parking Supply
			• Commute Trip Reduction
			  ○ TDM Program Coordinator and Marketing
			  ○ Electric Bike-Share Accommodations
			  ○ Ridesharing Support
			  ○ School Pool
			  ○ Hotel Shuttle Service

Table 4.5-10 State Plan-Level Consistency Analysis

Measure/Strategy	Description	Consistency Analysis
1 California Renewables Portfolio Standard (RPS) and SB 100	Increases the proportion of electricity from renewable sources to 33% renewable power by 2020 and 40% renewable power by 2024. SB 100 requires 50% by 2026 and 60% by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.	**Consistent.** The proposed project would be consistent with and not impair implementation of the state's RPS.
2 California Code of Regulations, Title 24, Part 6	Title 24, Part 6 of the California Code of Regulations establishes energy and water efficiency requirements for residential and non-residential new construction, additions to existing buildings, and alterations to existing buildings. Standards include requirements for water heating, HVAC, lighting, electrical systems, and solar design.	**Consistent.** The proposed project would meet the energy efficiency standards of Title 24.
3 Assembly Bill 1109	The Lighting Efficiency and Toxics Reduction Act (AB 1109) requires a reduction in average statewide electrical energy consumption by not less than 50% from the 2007 levels for indoor residential lighting and not less than 25% from the 2007 levels for indoor commercial and outdoor lighting by 2018.	**Consistent.** The proposed project would meet the applicable requirements from AB 1109.
4 California Green (CalGreen) Building Standards Code Requirements	CalGreen establishes green building standards to meet the goals of AB 32. CalGreen includes standards for residential and nonresidential structures such as new buildings or portions of new buildings, additions and alteration, and all occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies. Standards include requirements for site development, indoor and outdoor water use, construction waste reduction, disposal and recycling and building maintenance and operation.	**Consistent.** The proposed project would meet the CalGreen Building Standards Code Requirements.