3.5 Energy

Appendix F of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of nonrenewable energy in order to assure energy implications are considered in project decisions. As such, this section provides a summary of energy regulatory framework, discusses the existing conditions of the project site, discloses potential energy use during construction and operation of the components of the proposed project, and identifies any project design features and/or mitigation measures that may reduce energy consumption.

3.5.1 Existing Conditions

Environmental Setting

California consumes significantly more electricity than it generates, such that approximately 25 percent of California's electricity comes from outside the state, mostly the Pacific Northwest and the Southwest United States. Natural gas is the primary electricity source, with natural gas-fired power plants accounting for more than half of California's electricity generation. Until 2013, California's two nuclear power plants (San Onofre and Diablo Canyon) provided almost 20 percent of the state's total electricity. With the retirement of San Onofre Nuclear Generation Station, Diablo Canyon continues to provide approximately 7 percent of the state's electricity (EIA 2014).

San Diego Gas and Electric (SDG&E) provides natural gas and electricity services to the region. SDG&E is a regulated public utility that provides energy service to 3.4 million people through 1.4 million electric meters and 870,000 natural gas meters in San Diego and southern Orange counties. Our service area spans 4,100 square miles. In 2013, SDG&E's energy mix consistent of 23.6 percent from renewable energy sources (CPUC 2015). The energy mix is shown in Table 3.5-1, SDG&E Energy Mix in 2013. As shown in Table 3.5-1, the majority of SDG&E's energy is sourced from natural gas, at 67 percent of its power mix, with wind energy at 15 percent.

An existing pole line supporting a SDG&E 12kV Circuit 249 is located adjacent to State Route (SR) 76 along the property's entire frontage. The pole line is south of the roadway west of the proposed project entry, and it transitions to the north side at or near this point. The line supports three-phase electric 394.5 bare stranded aluminum alloy conductors, rated to carry up to 540 amps.

3.5.2 Regulatory Setting

Federal

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the transmission and sales of electricity, natural gas, and oil in interstate commerce, licensing of hydroelectric projects, and oversight of related environmental matters. The setting and enforcing of interstate transmission sales is also regulated by FERC.

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act to serve the nation's energy demands and promote feasibly attainable conservation methods. This act established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards were approved for model year 2017 passenger cars and light trucks at 54.5 miles per gallon (mpg). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Policy Act of 2005

The Energy Policy Act of 2005 put more responsibility on FERC, including regulating market manipulation and mergers as well as overseeing the nation's electrical infrastructure (FERC 2006). The Renewable Fuel Standard (RFS) program also was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012 (EPA 2014). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel.

Energy Independence and Security Act of 2007

In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the Energy Independence and Security Act of 2007 (EISA) includes other provisions related to energy efficiency, including RFS (Section 202), appliance and lighting efficiency standards (Sections 301–325), and building energy efficiency standards (Sections 411–441).

Under EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions of greenhouse gas (GHG) emissions from the use of renewable fuels, for reducing imported petroleum, and encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as "RFS2," and it increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022, as well as expanded it to include diesel fuel. RFS2 also established new categories of renewable fuel and set separate volume requirements for each one. Furthermore, it required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces (EPA 2013).

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

State

Title 20 and Title 24, California Code of Regulations

New buildings constructed in California must comply with the standards contained in Title 20, Public Utilities and Energy, and Title 24, Building Standards Code, of the California Code of Regulations. These efficiency standards apply to new construction of both residential and nonresidential buildings, and they regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in Title 24 guidelines.

California Green Building Standards Code (CALGreen)

On August 1, 2009, the California Building Standards Commission's California Green Building Standards Code went into effect. This code is the country's first statewide green building standards code. Originally a voluntary standard, aspects of CALGreen became mandatory in the 2010 code. The 2010 version of CALGreen took effect January 1, 2011, and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and nonresidential buildings. Local jurisdictions must enforce the minimum mandatory requirements and may also adopt the Green Building Standards with amendments for stricter requirement. Updates were added to CALGreen on July 1, 2012, and involve clarification of the difference between mandatory and voluntary provisions

regarding nonresidential additions and alterations. Additional updates associated with regulations of nonresidential buildings went into effect on January 1, 2014.

Assembly Bill 1493

Adopted in 2002 by the state legislature, Assembly Bill (AB) 1493 required that the California Air Resources Board (CARB) develop and adopt regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

On September 24, 2009, CARB adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles.

CARB has since adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2013).

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law Senate Bill (SB) 1368. The law limits long-term investments in base load generation by the state's utilities to power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

The CEC has designed the following regulations:

- Establish a standard for base load generation owned by, or under long-term contract to, publicly owned utilities of 1,100 pounds of carbon dioxide per megawatt-hour (MWh). This will encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This will facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard.

Warren–Alquist Energy Resources Conservation and Development Act

The Warren–Alquist Act gives statutory authority to the CEC as California's principle energy policy and planning organization. The CEC regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption.

Senate Bill X1 2

On April 12, 2011, Governor Jerry Brown signed SB X1 2 in the First Extraordinary Session, which expands California's RPS by establishing a goal of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 MW or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB X1 2 adds local publicly owned electric utilities to the RPS. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets, and the governing boards would be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while CEC and CARB will enforce the requirements for local publicly owned electric utilities.

CEQA Guidelines Appendix F

Appendix F of the CEQA Guidelines outlines what information should be included within an EIR regarding energy conservation where considered applicable or relevant. This appendix includes a list of energy impact possibilities and potential conservation measures and the goals of wise and efficient use of energy during development and operations.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32.[1] As specifically codified in Government Code Section 65080, SB 375 requires the Metropolitan Planning Organization relevant to the project area (here, the San Diego Association of Governments (SANDAG)) to include a Sustainable Communities Strategy in its Regional Transportation Plan. While the main focus of the Sustainable Communities Strategy is to plan for growth that will ultimately reduce GHG

[1] The Scoping Plan and subsequent First Update, as adopted by CARB in December 2008 and May 2014, respectively, rely on the requirements of SB 375 to secure GHG emission reductions from local land use decisions.

emissions, the strategy is also a part of a bigger effort to address many other development issues within the general vicinity, including transit and vehicle miles traveled (VMT).

Local

SDG&E Long-Term Resource Plan

In 2004, SDG&E filed a long-term energy resource plan (LTRP) with the CPUC, which identifies how it will meet the future energy needs of customers in SDG&E's service area. The LTRP identifies several energy demand reduction (i.e., conservation) targets, as well as goals for increasing renewable energy supplies, new local power generation, and increased transmission capacity.

The LTRP sets a standard for acquiring 20 percent of SDG&E's energy mix from renewables by 2010 and 33 percent by 2020. The LTRP also calls for greater use of in-region energy supplies, including renewable energy installations. By 2020, the LTRP states that SDG&E intends to achieve and maintain the capacity to generate 75 percent of summer peak demand with in-county generation. The LTRP also identifies the procurement of 44 percent of its renewables to be generated and distributed in-region by 2020.

County of San Diego General Plan

The County General Plan takes steps to address energy use throughout all General Plan Elements by including policies for improving energy efficiency, reducing waste, recycling, and managing water use. The General Plan seeks to reduce energy consumption through minimizing vehicle trips and approving land use patterns that support increased density in areas where there is infrastructure to support it, increased opportunities for transit, pedestrians, and bicycles, and through green building and land development conservation initiatives. Applicable General Plan policies include:

- **COS-14.1, Land Use Development Form.** Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.
- **COS-14.3, Sustainable Development.** Require design of residential subdivisions and nonresidential development through "green" and sustainable land development practices to conserve energy, water, open space, and natural resources.
- **COS-15.4, Title 24 Energy Standards.** Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.
- **COS-16.2, Single-Occupancy Vehicles.** Support transportation management programs that reduce the use of single-occupancy vehicles.
- **COS-17.2, Construction and Demolition Waste.** Require recycling, reduction and reuse of construction and demolition debris.

3.5.3 Analysis of Project Effects and Determination as to Significance

Guidelines for the Determination of Significance

The County's *Guidelines for Determining Significance* do not include sections on energy. Therefore, for the purpose of this EIR, Appendix F of the CEQA Guidelines applies to the direct and indirect impact analysis, as well as the cumulative impact analysis. Appendix F does not prescribe a threshold for the determination of significance. Rather, Appendix F focuses on reducing and minimizing inefficient, wasteful, and unnecessary consumption of energy. Therefore, for the purposed of this EIR, a significant impact to energy would result if the project would:

1. Result in the wasteful and inefficient use of nonrenewable resources during its construction.
2. Result in the wasteful and inefficient use of nonrenewable resources during long-term operation.
3. Be inconsistent with Adopted Plans and Policies.

Analysis

Construction Energy Consumption

Construction of the proposed project would last for approximately seven and a half years. Construction activities would consume energy through the operation of heavy off-road equipment, trucks, and worker traffic. Construction equipment fuel consumption for each of was based on equipment lists generated using California Emissions Estimator Model (CalEEMod) default values and input from the project applicant. The construction equipment, summarized in Table 3.5-2, is anticipated to be used in each phase of the project. The fuel consumption of off-road equipment calculated in this analysis is based on the fuel consumption rates in the OFFROAD 2011 statewide data sets as well as the horsepower, usage hours, and load factors from CalEEMod as part of the proposed project's air quality analysis.

Based on the information in Table 3.5-2 and the anticipated construction schedule, construction equipment would result in the consumption of approximately 649,982 gallons of diesel fuel over the entire construction period.

Worker, vendor, and haul trips would result in approximately 8,036 VMT over the entire construction period. As part of the proposed project cut and fill would be balanced on site and the haul trips would not result in the consumption of fuel during construction. Therefore, construction haul trips would only be associated with demolition activities. A countywide average fuel consumption of 18.8 mpg was used to determine fuel consumption from worker, vendor, and haul trips because these trips would occur in a variety of different vehicle types

and classes (CNRA 2009). As a result, is it estimated that construction worker, vendor, and haul trips would result in the consumption of approximately 151,077 gallons of fuel during the entire construction phase.

Although the proposed project would result in the consumption of an estimated 649,982 gallons of diesel and 151,077 gallons of gasoline during construction, the project is designed to balance the grading on site. This would substantially reduce the amount of potential haul trips associated with the import and export of soil for construction of the proposed project, which in turn would reduce the amount of fuel required by the project. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with local, state, and federal regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during project construction. Considering these reductions in transportation fuel use, the proposed project would not result in the wasteful and inefficient use of energy resources during construction and impacts would be **less than significant**.

Operation Energy Consumption

Long-term energy consumption associated with the proposed project includes electricity and natural gas consumption by residents and the fire station, energy use associated with the sewage lift station, energy from water conveyance, and long term vehicle operations from residents.

Electricity and Natural Gas Consumption

During operations the proposed project would consume natural gas for space heating, water heating, and cooking associated with the residential land uses on the project site. As shown in Appendix O, Greenhouse Gas Analysis, the estimated natural gas consumption was estimated for each of the project's land uses based on the CalEEMod default values. Based on these calculations the proposed project is estimated to consume approximately 19,800,880 thousand British thermal units of natural gas per year during operation.

In addition to the consumption of natural gas, the proposed project would use electricity for lighting, appliances, and other uses associated with the project's land uses. Appendix O estimated the annual electricity demand by utilizing CalEEMod default values for project's specific land uses. Based on this methodology the proposed project is estimated to use approximately 5,414,021 kilowatt-hours (kWh) of electricity per year. The project design includes installation of solar panels on site to produce 4,756,002 kWh of electricity per year on average. Under current technology, this equates to up to 9,605 solar panels, or an average of 12 solar panels on each single-family home, 2,858 solar panels on the multifamily units, 78 solar panels on the clubhouse, and 40 solar panels on the fire station. with each solar panel having an estimated

rating of 285 watts. The actual capacity and/or conversion efficiency of the photovoltaic panels may alter the actual number of roofs or non-residential roof space requirements to meet the annual 3,346,200 kWh requirement at project buildout.

As described above the proposed project would result in a long-term increase in demand for electricity and natural gas from SDG&E. However, the project would be designed according to the most recent Title 24 standards of the California Code of Regulations. Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The most recent amendments, referred to as the 2013 standards, became effective on July 1, 2014. The proposed project would increase building electricity and natural gas efficiency to at least Title 24 2013 and would be required to achieve at least a 25 percent reduction over Title 24, 2008. In accordance with BE-4 of California Air Pollution Control Officers Association's Quantification document, the project would also install Energy Efficient Dishwashers within the residential units and the firehouse and house fans within the residential units (Project Design Feature PDF-EN-1). Furthermore, the lighting efficiency would be reduced by 50 percent which can be achieved through use of Compact Fluorescent Lighting or Light Emitting Diodes (Project Design Feature PDF-EN-2). These measures would reduce inefficient, wasteful and unnecessary consumption of energy to the extent feasible. Therefore, impacts from the wasteful or inefficient use of electricity or natural gas during operation of the project would be **less than significant**.

Water Treatment, Conveyance, and Distribution

Water used for both indoor and outdoor requires electricity for water treatment, conveyance, and distribution. As shown in Appendix O, the proposed project's water demand was calculated based on default values for the specific land uses proposed by the project in CalEEMod for the project's specific land uses. Based on this methodology the proposed project is estimated to use approximately 51.04 million gallons of indoor water per year as well as 36.59 million gallons of outdoor water per year. This would result in a total of approximately 1,071,192 kWh per year of electricity for indoor and outdoor water treatment, conveyance, and distribution (CEC 2006).

Although the proposed project would result in electricity use from the treatment, conveyance, and distribution of water to the project site, the project would also require all water fixtures to be compliant with the 2013 California Green Building Standards Code and updated amendments of the County Landscape Ordinance, which would reduce the amount of water used by the project and require compliance with regulations relating to drought conditions. Therefore, the proposed

project would not result in the wasteful or inefficient use of electricity for water treatment, conveyance, and distribution and impacts would be **less than significant**.

Wastewater Service

The project is not located in any of the local sanitation or maintenance districts. Wastewater generation is included in the CalEEMod data for water, discussed above under Water-Related Energy. Additionally, energy demand related to wastewater treatment is accounted for in the CEC's recommended water-energy proxies based on the water-use cycles for indoor and outdoor uses, as described above (CEC 2006). It should be noted that the energy consumption associated with the proposed project's water demand (including wastewater conveyance) was estimated using the CEC-recommended water energy proxies for southern California, which include substantial energy usage associated with water conveyance and distribution. Since the project includes on-site utilization of reclaimed water, the project's water-related energy demand is likely overstated.

The incremental increase of energy use associated with implementation of the project would not require the construction of new energy facilities and sources of energy that would not otherwise be needed to serve the region. Wastewater service would require an extension of sewer line and a pump station to the treatment plant. The energy added for the extension and use of these facilities combined with the project's estimated electricity and natural gas consumption would not result in additional energy generation or transmission infrastructure due to the location and capacity of existing energy infrastructure near the project site (overhead power lines along SR 76 and the Orange Grove Plant). Additionally, the project would be phased over several years, during which SDG&E would be able to assess, provide for, and plan for long-term energy distribution to the project site as each phase is developed (Cormode, SDG&E, pers. comm. 2015). Therefore, the project would not result in the wasteful or inefficient use of electricity for wastewater treatment, and impacts would be **less than significant**.

Fuel Consumption

During operation of the proposed project vehicle trips would be generated by the proposed project's specific land uses. The proposed project's specific land uses were modeled in CalEEMod using default vehicle trip generation rates for park, residential, and other uses on the project site. As shown in Appendix O, the vehicle trips generated would result in approximately 23,790,000 VMT. Based on a countywide average fuel consumption of 18.8 mpg, the proposed project would result in the consumption of an estimated 1,663,699 gallons of transportation fuel.

However, the proposed project would include 246 workforce housing units on site to allow for employees of the surrounding casinos and employment centers to live within 17 miles of work.

The design of the project would result in a reduced work commute of an estimated 6.3 miles, resulting in a reduction of approximately 1,039,516 VMT per year. Assuming a countywide average fuel consumption of 18.8 mpg, the design of the proposed project would save an estimated 55,293.4 gallons of transportation fuel annually. Furthermore, various federal and state regulations including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program would serve to reduce the project's transportation fuel consumption progressively into the future. Therefore, the project would be designed to avoid the wasteful and inefficient use of transportation fuel during operations and impacts would be **less than significant**.

It should be noted that state and federal regulatory requirements addressing fuel efficiency are expected to increase fuel efficiency over time as older, less fuel-efficient vehicles are retired. The federal CAFE standards and AB 1493 fuel efficiency standard (analogous to the federal CAFE standard), as well as light/heavy vehicle efficiency/hybridization programs, all contribute to increased fuel efficiency and therefore would reduce vehicle fuel energy consumption rates over time. Thus, the annual vehicular energy consumption calculated for the proposed project is considered a conservative estimate, since 2013-level fuel efficiency was used in the calculation. While the project would increase the consumption of gasoline and diesel proportionately with projected population growth, the increase would be accommodated within the projected growth as part of the energy projections for the state and the region and would not require the construction of new regional energy production facilities. Because gasoline and diesel are transported via truck to individual service stations, the increase in demand also is not anticipated to require major improvements to local fueling infrastructure. Therefore, energy impacts related to fuel consumption/efficiency during project operations would be **less than significant**.

Be Inconsistent with Adopted Plans and Policies

Many of the regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, as well as reducing water consumption and VMT. The proposed project includes energy conservation measures to meet and exceed the regulatory requirements. The list of project design features includes measures to not use energy in a wasteful manner or conflict with adopted energy conservation plans. As discussed previously, the proposed project would include 246 multifamily affordable housing units on site to allow for employees of the surrounding casinos and employment centers to live within 17 miles of work, which would result in a reduced work commute of an estimated 6.5 miles (reduction of approximately 1,039,516 VMT per year) (Appendix O). This would also afford carpool opportunities for employees working in the surrounding areas, thereby reducing single-occupancy vehicle trips. Furthermore, as a condition of the project, the HOA manager will work with the major nearby employment centers to establish a shuttle program. The HOA manager will coordinate with the employment centers to provide identification and GIS information for participating households, as well as scheduling needs. The

shuttle would provide direct door to door access from each participating household to the employment center. It should be noted that no GHG reduction credits were taken for the project condition as part of the GHG analysis; see Appendix O.

The project would be consistent with several energy reduction policies of the County General Plan (see Section 3.5.2, Regulatory Setting), including policies COS-14.1, COS-14.3, and COS-16.2. Additionally, the project would be consistent with sustainable development and energy reduction policies such as policies COS-14.3 and COS-15.4, through compliance with the most recent Title 24 standards at the time of project construction, installation of energy-efficient appliances within each housing unit, and provision of exterior outlets in residential buildings for recharging electric cars and other equipment. Therefore, the proposed project would implement energy reduction design features and comply with the most recent energy building standards consistent with applicable plans and policies and would not result in wasteful or inefficient use of nonrenewable energy sources. Therefore, impacts would be **less than significant**.

3.5.4 Cumulative Impact Analysis

Potential cumulative impacts on energy would result if the proposed project in combination with past, present, and future projects would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction or operation. The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. Projects that would mostly include construction, such as transportation infrastructure, could also contribute to a cumulative impact; however, the impact of these projects would be limited because they would typically not involve substantial ongoing energy use. Other large master planned communities listed in Table 1-4 in Chapter 1, Project Description, such as Lilac Hills Ranch, Meadowood, Newland Sierra, Campus Park, and Campus Park West, would result in incremental increases in long-term energy consumption similar to the proposed project through the introduction of new population to the region. Each of these projects, however, would incorporate design features for reducing energy consumption and increasing efficiency during operation.

As described above, the proposed project would result in less than significant impacts on the wasteful, inefficient, or unnecessary use of energy due to various design features including balancing grading on site to reduce haul trips during construction, design of the project to accommodate a reduce work commute, installation of energy efficient appliances and lights, as well as installation of efficient water fixtures. Similar to the proposed project, the cumulative projects would be subject to the California Green Building Standards Code that provides energy

efficiency standards for commercial and residential buildings. The California Green Building Standards Code would implement increasingly stringent energy efficiency standards that would require the proposed project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Future development would also be required to meet even more stringent requirements including the objectives set in the AB 32 Scoping Plan (CARB 2008), which would seek to make all newly constructed residential homes net-zero energy consumers by 2020 and all new commercial buildings net-zero energy consumers by 2030. Furthermore, various federal and state regulations including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program would serve to reduce the transportation fuel demand by cumulative projects.

In consideration of the cumulative energy use demand, the project would not contribute to a substantial demand on energy resources and services because new regional energy facilities would be required to be constructed as a result of the incremental increase in energy demand resulting from the proposed project.

With the adherence to the increasingly stringent building and vehicle efficiency standards as well as implementation of the project's design features that would reduce energy consumption, the proposed project **would not contribute to a cumulative impact to the wasteful or inefficient use of energy**. As such, the proposed project would not result in a cumulatively considerable contribution to a potential cumulative impact.

3.5.5 Conclusion

Impacts from the wasteful or inefficient use of energy would be **less than significant**.

Table 3.5-1
SDG&E Energy Mix in 2013

Energy Source	Percent of Power Mix
Biomass and waste	3%
Geothermal	2%
Solar	4%
Wind	15%
Coal	3%
Natural gas	67%
Unspecified	6%

Source: SDG&E 2014.

Table 3.5-2
Construction Equipment

Equipment Type	Quantity	Usage Hours	Horse Power	Load Factor
Demolition				
Excavator	3	8	162	0.38
Rubber-tired dozer	2	8	255	0.40
Concrete saw	1	8	81	0.73
Mass Site Grading				
Rubber-tired dozers	5	8	255	0.40
Scrapers	4	7	361	0.48
Tractors/loaders/backhoes	4	5	97	0.37
Bore/drill rigs	2	7	205	0.50
Graders	2	7	174	0.41
Water trucks	2	7	400	0.38
Trenching				
Excavator	2	8	162	0.38
Other general industrial equipment	1	8	87	0.34
Tractor/loader/backhoes	1	8	97	0.37
Fine Site Grading				
Grader	2	6	174	0.41
Water trucks	2	8	400	0.38
Rubber-tired dozer	1	8	255	0.40
Tractor/loader/backhoes	1	7	97	0.37
Paving				
Paving equipment	2	8	130	0.36
Rollers	2	8	80	0.38
Pavers	1	8	125	0.42
Building Construction				
Forklift	3	8	89	0.20
Tractor/loader/backhoe	3	7	97	0.37
Crane	1	7	226	0.29
Generator	1	8	84	0.74
Welders	1	8	46	0.45
Architectural Coating				
Air compressors	1	6	78	0.48

Source: Appendix O.