4.10 ENERGY

4.10.1 INTRODUCTION

This section evaluates potential impacts associated with energy consumption and demand that would result from the implementation of the proposed El Dorado Hills Apartments project ("proposed project"). The section also provides a description of the regulatory framework governing the management of energy on a federal, state, regional, and local level. The analysis in this section is based on the *Air Quality and Greenhouse Gas Analysis* prepared for the proposed project by De Novo Planning Group, dated June 2017. The report is presented in **Appendix 4.1** of this Draft EIR.

4.10.2 ENVIRONMENTAL SETTING

Electric Supply

Electricity on the West Slope of El Dorado County is supplied by Pacific Gas and Electric Company (PG&E).[1] PG&E owns and operates electricity infrastructure in the county and throughout Northern California that includes power lines, powerhouses, and substations. Powerhouses are located at Chili Bar on the South Fork American River and at Forebay Reservoir in Pollock Pines. A total of nine electric substations are located throughout the county; an additional station is proposed at Pine Hill on a 10-acre site at the southeast corner of the intersection of Starbuck Road and Fremont's Loop. PG&E no longer owns all of its facilities, having sold some recently as a result of legislative deregulation. PG&E produces some of its own power and purchases some of its electricity through the Independent System Operator, which in turn obtains electricity from a number of companies that operate power plants throughout the Western Grid. The Western Grid is a multistate grid that provides electricity from as far away as Washington State and Canada (El Dorado County 2003). The Sacramento Municipal Utility District (SMUD) also owns and maintains power lines in El Dorado County; however, it does not provide electricity services to users in the county (El Dorado County 2003). In 2015, the total electricity consumption by residential uses in El Dorado County was about 736 GWh (CEC 2016b).

Electricity generated within the State of California in 2015 was from natural gas (60 percent), nuclear (9 percent), large hydroelectric (6 percent), renewable resources (25 percent), and coal (<1 percent) (CEC 2016a). The rest of the electricity used in the state was generated within the United States either in the Southwest or Pacific Northwest. The State of California power mix, based on in-state generation and out-

[1] The Sacramento Area Council of Governments (SACOG) has distributed the unincorporated El Dorado County Regional Housing Needs Allocation (RHNA) by "East Slope" (Tahoe National Forest Area and Lake Tahoe Basin) and "West Slope" (the remainder of the county.)

of-state purchases in 2015 was comprised of natural gas (44 percent), renewable resources (22 percent), large hydroelectric (5 percent), coal (6 percent), nuclear (9 percent), and additional unspecific sources of power (14 percent) (CEC 2015a). In 2015, the total system power for California was 295,405 gigawatt-hours (GWh), which is down about 0.5 percent from 2014's total system electric generation of 297,062 GWh (CEC 2016a).

Natural Gas

PG&E supplies natural gas on the West Slope of El Dorado County. Currently, natural gas distribution lines extend from the west (Sacramento County) to the community of El Dorado Hills and the El Dorado Hills Business Park. The households in the remaining portions of the West Slope of the county use either all electric energy or use propane in place of natural gas (El Dorado County 2003). In 2015, the total natural gas consumption by residential uses in El Dorado County was about 2,028,300 MBTU/year.

In 2012, natural gas used within California was extracted in the State of California (9 percent), Canada (16 percent), the Rocky Mountain region of the United States (40 percent), and in the southwest United States (35 percent) (CPUC 2017). In 2012, natural gas was used in California to produce electricity (45.6 percent), in residential uses (21 percent), in industrial uses (25 percent), and in commercial uses (8.6 percent). The total natural gas usage in 2012 was 2,313,000 MBTU/year (CEC 2016a).

Petroleum Based Fuel

In 2015, 12 billion gallons of gasoline (non-diesel) and 1.6 billion gallons of diesel fuel were sold statewide (CEC 2016c). While projected gasoline sales for El Dorado County were expected to be approximately 81 million gallons in 2015, the number of gallons consumed in the County was 65 million gallons (CEC 2015b). Similar to the number of gasoline gallons consumed, the number of diesel gallons consumed was lower than the California Energy Commission's (CEC) projection. Countywide, seven million gallons of diesel fuel were consumed in 2015, while the CEC had projected that nine million gallons of diesel fuel would be consumed countywide (CEC 2015b).

4.10.3 REGULATORY CONSIDERATIONS

4.10.3.1 Federal Laws and Regulations

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing and regularly updating vehicle standards. The

U.S. Environmental Protection Agency (US EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the CAFE program, the average fuel economy for new light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 27.5 mpg for the 2012 model year and is proposed to increase to 54.5 by 2025.

Energy Star Program

In 1992, the U.S. EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, US EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

4.10.3.2 State Laws and Regulations

Title 24

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On April 23, 2008, the CEC adopted the 2008 standards, which applied to projects that submitted an application for a building permit on or after January 1, 2010. The CEC adopted the 2008 standards for a number of reasons: (1) to provide California with an adequate, reasonably priced, and environmentally sound supply of energy; (2) to respond to Assembly Bill 32 (AB 32; the Global Warming Solutions Act of 2006), which requires California to reduce its greenhouse gas emissions to 1990 levels by 2020; (3) to pursue the statewide policy that energy efficiency is the resource of choice for meeting California's energy needs; (4) to act on the findings of California's Integrated Energy Policy Report, which indicate that the 2008 Standards are the most cost-effective means to achieve energy efficiency, reduce the energy demand associated with water supply, and reduce greenhouse gas emissions; (5) to meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures in the update of all state building codes; and (6) to meet the Executive Order in the Green Building Initiative

to improve the energy efficiency of nonresidential buildings through aggressive standards.[2] In 2013, updates were made to the 2008 Title 24 standards (effective January 1, 2014). The updated 2013 Title 24 standards will be applicable to the project.

The California Green Building Standards Code, which is Part 11 of the Title 24 Building Standards Code, is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2013 CALGreen Code is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools, and hospitals) throughout California beginning on January 1, 2014. The 2013 CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction solid waste reduction, indoor water use reduction, building material selection, natural resource conservation, site irrigation conservation, and more. Additionally, this code encourages buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, the CEC believes a green building should achieve at least a 15 percent reduction in energy usage when compared to California's mandatory energy efficiency standards.

AB 32

In addition to Title 24, AB 32 is anticipated to result in the future regulation of energy resources in California. (See **Section 4.4, Greenhouse Gas Emissions,** for additional information on AB 32.) In order to achieve these emission reductions, it is generally accepted that California will need to improve its overall energy efficiency, which includes the use of more renewable energy resources. Pursuant to AB 32, the California Air Resources Board (CARB) will work with other state agencies (including the CEC), to implement feasible programs and regulations that reduce emissions and improve energy efficiency.[3]

Senate Bill 32

In the 2016 legislative session, the Legislature passed, and the Governor signed, Senate Bill 32 (SB 32). This bill requires CARB to adopt rules and regulations to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

Renewable Portfolio Standard

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy

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2 See http://www.energy.ca.gov/title24/2008standards/index.html, 2013.

3 See http://www.arb.ca.gov/cc/ghgsectors/ghgsectors.htm#electric, September 13, 2013 (highlights targeted improvements for the energy sector).

standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Senate Bill 350

In the 2015 legislative session, the Legislature passed, and the Governor signed, Senate Bill 350 (SB 350). The legislation requires that, by 2030, 50 percent of all electricity provided by power plants in California must be from renewable sources. SB 350 further requires the California Energy Commission (CEC) to establish annual targets for statewide energy efficiency savings and demand reduction that would achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030. The bill requires the Public Utilities Commission to establish efficiency targets for investor-owned electrical and gas corporations consistent with the 2030 goal, and the CEC to establish annual targets for energy efficiency savings and demand reductions for local publicly-owned electric utilities consistent with the 2030 goal. Each retailer of electricity must regularly file an integrated resource plan (IRP) for review and approval.

Other Energy Related Statutes and Executive Orders

Additional legislation and executive orders focused on energy efficiency in California are highlighted briefly below:

- Senate Bill 107: This legislation, which addresses California's Renewables Portfolio Standard (RPS), requires retail sellers of electricity to procure 20 percent of retail sales from renewable energy by 2010.
- Assembly Bill 1613: This legislation, also known as the Waste Heat and Carbon Emissions Reduction Act, was designed to encourage the development of new combined heat and power systems in California with a generating capacity of up to 20 MW.
- Senate Bill 1: This legislation enacted the Governor’s Million Solar Roofs program and has an overall objective of installing 3,000 MW of solar photovoltaic systems.
- Senate Bill 1389: This legislation requires the California Energy Commission to prepare a biennial integrated energy policy report that contains an assessment of major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state’s economy; and protect public health and safety.
- Executive Order S-14-08: This order established accelerated RPS targets—specifically 33 percent by 2020.
- Executive Order S-21-09: This order requires CARB to adopt regulations, by July 31, 2010, increasing California's RPS to 33 percent by 2020.

4.10.3.3 Local Plans and Policies

El Dorado County General Plan

The following presents guiding and implementing policies from the current County of El Dorado General Plan (2004) relevant to energy and contained within the Public Services and Utilities Element.

GOAL 5.6: GAS, ELECTRIC, AND OTHER UTILITY SERVICES: Sufficient utility service availability consistent with the needs of a growing community.

OBJECTIVE 5.6.1: PROVIDE UTILITY SERVICES: Community Regions shall be provided with adequate and reliable utility services such as gas, electricity, communication facilities, satellite and/or cable television, and water distribution facilities, while recognizing that levels of service will differ between Community Regions, Rural Centers, and Rural Regions.

Policy 5.6.1.1 Promote and coordinate efforts with utilities for the undergrounding of existing and new utility distribution lines in accordance with current rules and regulations of the California Public Utility Commission and existing overhead power lines within scenic areas and existing Community Regions and Rural Centers.

Policy 5.6.1.2 Reserve adequate rights-of-way to facilitate expansion of services in a timely manner.

OBJECTIVE 5.6.2: ENCOURAGE ENERGY-EFFICIENT DEVELOPMENT: Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs.

Policy 5.6.2.1 Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

Policy 5.6.2.2 All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

4.10.4 IMPACTS AND MITIGATION MEASURES

4.10.4.1 Significance Criteria

Neither Appendix F of the *State CEQA Guidelines* nor PRC Section 21100(b)(3)) provides a threshold of significance that might be used to evaluate the potential significance of energy consumption of a

proposed project. Rather, the emphasis is on reducing "the wasteful, inefficient, and unnecessary consumption of energy." Based on this focus of the guidelines, for purposes of this Draft EIR, the proposed project would have a significant impact related to energy consumption if it would:

- Involve the wasteful, inefficient, or unnecessary consumption of energy, especially fossil fuels such as coal, natural gas, and petroleum, associated with project design, project location, the use of electricity and/or natural gas, and/or the use of fuel by vehicles anticipated to travel to and from the project; or
- Result in the excessive consumption of energy resources that could not be accommodated within the long-term electricity supply and distribution system or the long-term natural gas supply and distribution system of their respective supplier.

4.10.4.2 Methodology

Appendix F of the *State CEQA Guidelines* requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to Appendix F, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed project would be considered "wasteful, inefficient, and unnecessary" if it were to (1) violate state and federal energy standards, (2) result in significant adverse impacts related to project energy requirements, energy inefficiencies, or energy intensiveness of materials, (3) cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, (4) fail to comply with existing energy standards, or (5) otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The methodology used to estimate the construction-phase energy use is described in **Impact EN-1** below. With respect to energy consumption during occupancy/operation, the increased electricity and natural gas demand estimates due to operation/occupancy of the proposed project were developed using the CalEEmod emissions model. In addition, as the proposed project would result in daily vehicle trips to and from the project site due to typical residential commutes, the increase in the consumption of petroleum-based fuel was calculated for the proposed project based on vehicle miles travelled (VMT). CalEEmod was used to estimate VMT for the proposed project. Energy consumption during occupancy/operation is presented in **Impact EN-1** and **Impact EN-2** below.

4.10.4.3 Project Impacts and Mitigation Measures

Impact EN-1: Construction and operation of the proposed project would increase the consumption of energy but would not result in wasteful, inefficient or unnecessary consumption of energy. (*Less than Significant*)

The proposed project is primarily a residential development, with 214 apartment units, composed of two apartment buildings, a parking structure, outdoor recreation areas, and an informal open space area. The apartment units would range in size from 576 square feet to 1,195 square feet, with a mix of 114 studio/1-bedroom units and 100 2-bedroom units. The proposed project uses would not have a high or wasteful demand for energy. The amount of energy used at the residential uses within the project site would directly correlate to the number and size of residential units, the energy consumption of associated unit appliances, garage usage, and outdoor lighting, landscape maintenance, and other energy uses associated with project site activities. Other proposed project energy uses include fuel used by vehicle trips generated by the project during its construction and operation, and fuel used by off-road construction vehicles during construction. The following analysis provides calculated levels of energy use expected for the proposed project, based on CalEEMod v.2016.3.1 and the California Air Resource Board's EMFAC2014.[4]

Operational Energy Use

The proposed project would use energy resources for the operation of project buildings (electricity and natural gas) and for on-road vehicle trips (gasoline and diesel fuel) generated by the proposed project. The proposed project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures.

Electricity and Natural Gas

Electricity and natural gas would be used primarily for residential housing end uses. Additionally, the electricity would be required to pump water and wastewater to and within the project site and is included in the electricity estimate. Total annual unmitigated and mitigated electricity (kWh) and natural gas (kBTU) usage associated with the operation of the proposed project are shown in **Table 4.10-1, Project Operational Natural Gas and Electricity Usage (Unmitigated Scenario)**, and **Table 4.10-2, Project Operational Natural Gas and Electricity Usage (Mitigated Scenario)**, below (as provided by

[4] Many of the assumptions provided by CalEEMod are conservative relative to the proposed project. Therefore, this analysis provides conservative estimate of proposed project energy usage.

CalEEMod). The proposed project incorporates feasible mitigation to reduce the proposed project's operational electricity and natural gas consumption (see **Mitigation Measure AIR-2**).

Table 4.10-1
Project Operational Natural Gas and Electricity Usage (Unmitigated Scenario)

Energy[(a)]	Natural Gas (kBTU/year)	Electricity (kWh/year)
Apartments Mid Rise	1,049,350	1,069,570
Total	**1,049,350**	**1,069,570**

Source: De Novo, 2017
Note: (a) Numbers provided here may not add up exactly to total due to rounding.

Table 4.10-2
Project Operational Natural Gas and Electricity Usage (Mitigated Scenario)

Energy[(a)]	Natural Gas (kBTU/year)	Electricity (kWh/year)
Apartments Mid Rise	978,637	1,000,510
Total	**978,637**	**1,000,510**

Source: De Novo, 2017
Note: (a) Numbers provided here may not add up exactly to total due to rounding.

As shown in **Table 4.10-1** and **Table 4.10-2**, proposed project operational energy usage would be reduced with implementation of **Mitigation Measure AIR-2**. Measures that would increase project energy efficiency include disallowing wood-burning fireplaces/hearths and requiring the installation of energy efficient appliances. As a conservative estimate, the proposed project's electricity requirements would be reduced by approximately 6.5 percent and natural gas requirements would be reduced by approximately 6.7 percent with the incorporation of **Mitigation Measure AIR-2,** which would require the implementation of several of the project's sustainable development features that are listed in **Chapter 3.0**. With mitigation, this would represent less than 0.14 percent of the 2015 countywide annual electricity demand and less than 0.05 percent of the 2015 countywide annual natural gas consumption.

On-road Vehicles

The proposed project would generate vehicle trips during its operational phase. Based on the peak hour trip generation rates detailed in the project-specific Traffic Impact Analysis (TIA) found in **Appendix 4.8**, the proposed project would generate an estimated 1,403 gross daily vehicle trips. To calculate operational on-road vehicle energy usage and emissions, default trip lengths generated by CalEEMod were used,

which are based on the proposed project location and urbanization level parameters selected within CalEEMod ("El Dorado-Mounty County" County and "Urban" urbanization level). These values are provided by the individual districts or use a default average for the state, depending on the location of the proposed project. Based on default factors provided by CalEEMod, the weighted average distance per trip is assumed to be approximately 8.86 miles. Therefore, the proposed project would generate a total of approximately 12,436 average daily vehicle miles travelled (Average Daily VMT). Using fleet mix data provide by CalEEMod (v.2016.3.1), and Year 2020 gasoline and diesel mpg factors for individual vehicle classes as provided by EMFAC2014, a weighted mpg factor was derived (25.0 mpg for gasoline and 14.4 mpg for diesel). Based on these factors, the unmitigated proposed project would use a total of 462 gallons of gasoline and 62 gallons of diesel fuel per day, or 168,673 gallons of gasoline and 22,558 annual gallons of diesel fuel per year. This would represent approximately 0.26 percent of the countywide annual gasoline consumption and approximately 0.32 percent of the countywide annual diesel consumption.

The proposed project would be in compliance with all applicable Federal, State, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g., solar and wind) within its energy portfolio. Based on this requirement, PG&E is expected to procure at least 33 percent of its electricity resources from renewable energy resources by 2020, and 50 percent by 2030. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. Furthermore, as described previously, the incorporation of **Mitigation Measure AIR-2** would further reduce project energy consumption. The proposed project would also be in compliance with the planning documents described above and would not result in an inefficient, wasteful, or unnecessary use of energy resources during project operation.

Construction Energy Use

The proposed project would use energy resources during construction from off road equipment and on-road vehicle trips generated by and associated with the proposed project (gasoline and diesel fuel).

On-road Vehicles

The proposed project would generate on-road vehicle trips during project construction from construction workers and vendors. Estimates of vehicle fuel consumed were derived based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by

CalEEMod, and Year 2020 gasoline mpg factors provided by EMFAC2014. It was assumed that all on-road worker vehicles generated by the construction phase of the project would use gasoline as a fuel source (as opposed to diesel fuel or alternative sources). Additionally, it was assumed that all on-road vendor trucks generated by the construction phase would use diesel fuel. **Table 4.10-3, On-road Mobile Fuel Generated by Project Construction Activities – By Phase**, below, describes gasoline and diesel fuel used by on-road mobile sources during each phase of the construction schedule. As shown, the majority of on-road mobile vehicle fuel used during the construction of the proposed project would occur during the building construction phase. See **Appendix 4.1** for detailed calculations of on-road mobile fuel generated during the project construction period.

Table 4.10-3
On-road Mobile Fuel Generated by Project Construction Activities – By Phase

Construction Phase	Number of Days	Total Daily Worker Trips	Total Daily Vendor Trips	Gallons of Gasoline Fuel	Gallons of Diesel Fuel
Site Preparation	5	18	-	39	-
Grading	8	15	-	52	-
Building Construction	273	154	23	18,157	6,713
Paving	22	20	-	190	-
Architectural Coating	18	31	-	241	-
Total	**326**	**238**	**23**	**18,679**	**6,713**

Source: De Novo, 2017

Off-road Vehicles

Off-road construction vehicles and equipment would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive vehicles that could be used during the construction phase of the proposed project includes: cranes, forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the off-road mobile vehicles during the construction phase of the proposed project (as provided by the CalEEMod output), and a CO2 to diesel fuel conversion factor provided by the U.S. Energy Information Administration, the proposed project would use a maximum total of approximately 35,968.28 gallons of diesel fuel for off-road construction vehicles. Detailed calculations are provided in **Appendix 4.1**.

The estimated amounts of energy resources reported for on-road and off-road construction vehicles and equipment would be consumed over a period of 15 months and would represent a small percentage of the total energy used in the county. More importantly, for reasons presented below, this consumption would not represent a wasteful and inefficient use of energy resources.

There is growing recognition among developers and retailers that sustainable construction is not any more expensive than "business as usual" construction methods, and further, that there are long-term significant cost-savings potential in utilizing green building practices and materials. In addition, the proposed project would feature a sustainable design to comply with CALGreen, which would also result in the use of sustainable materials and recycled content that would reduce energy consumption during project construction.

Further, the project has been designed to balance earthwork on the site between cut and fill. Only incidental excavated materials associated with the excavation of building footings and plumbing will need to be hauled off site. For this reason, only a limited number of haul trucks will be required to remove soil from the project site. Construction materials would include recycled materials and products originating from nearby sources to the extent feasible in order to comply with CALGreen and to reduce costs of transportation. Furthermore, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

For the reasons listed above, the proposed project would not involve the inefficient, wasteful, and unnecessary use of energy during construction and the construction-phase impact related to energy consumption would be less than significant.

Mitigation Measures: No mitigation measures are required.

Impact EN-2: **The proposed project would not result in the excessive consumption of energy resources that could not be accommodated within the long-term electricity supply and distribution system or the long-term natural gas supply and distribution system. (*Less than Significant*)**

Construction

Electricity and natural gas from the PG&E supply and distribution systems would not be used during project construction, and there would be no impact on the existing supply and distribution systems.

Operation

As stated above, the proposed project's annual natural gas and electricity demand would represent very small percentages of the 2015 countywide annual natural gas and electricity consumption. Given the small fraction that the project's demand would constitute of the total demand, the project's demand by itself would not require the construction of new power generation facilities. The electrical loads and

natural gas demand associated with the proposed project are within the parameters of projected load growth in the County, and PG&E maintains sufficient capacity to serve the proposed project. The proposed project would comply with all existing energy standards, including those established by El Dorado County, and would not result in significant adverse impacts on energy resources. Thus, the proposed project would not be expected to cause an inefficient, wasteful, or unnecessary use of energy resources and the operation of the proposed project would not result in the consumption of energy resources that could not be accommodated within the long-term electricity and natural gas supply and distribution system of PG&E. The project's impact on supply and distribution systems would be less than significant.

Although the project demand for electricity by itself would not require the construction of new power generation facilities, the demand would, however, combine with the demand for electricity associated with past, present and reasonably foreseeable future projects in the region, and could contribute to the need for an expansion of an existing power plant or the construction of a new power plant. PG&E produces some of the electricity it sells and purchases the rest from other producers; the procured electricity could come from in-state or out of state generation facilities. It is, therefore, infeasible and speculative to predict where the new supply sources would be located or to evaluate the environmental consequences from the construction and operation of such facilities. Furthermore, if the new power generation facilities were to be located in California, they would be subject to environmental review and would be required to avoid or minimize their environmental impacts. Accordingly, the cumulative impact associated with energy use would be less than significant.

Mitigation Measures: No mitigation measures are required.

4.10.5 ALTERNATIVES

Appendix F of the *State CEQA Guidelines* recommends that alternatives should be compared in terms of overall energy consumption and in terms of measures to reduce energy use. The energy use and impacts of alternatives to the proposed project are presented in **Section 5.0, Alternatives**, of this Draft EIR. The alternatives evaluated in **Section 5.0** include alternatives that would involve lower energy use than the proposed project.

4.10.6 UNAVOIDABLE ADVERSE EFFECTS

Appendix F recommends that the EIR report any unavoidable adverse impacts associated with the project's energy use. The analysis presented in **Impact EN-1** and **Impact EN-2** above shows that there would not be a significant unavoidable impact associated with the use of energy by the project.

4.10.7 IRREVERSIBLE COMMITMENT OF RESOURCES

Appendix F states that an irreversible commitment of resources could occur if the project preempts future energy development or future energy conservation. The proposed project is a residential development that would not preempt future energy development on the project site since there are no energy resources located on or near the site. The proposed project would also not preempt future energy conservation, because similar to other residential units in the County, the apartment buildings would be able to implement energy related improvements in the future, including solar panels and electric vehicle charging stations.

4.10.8 SHORT-TERM GAINS AND LONG-TERM IMPACTS

Appendix F suggests that the project's short-term gains and long-term impacts can be evaluated by calculating the project's energy cost over the project's lifetime. As noted above, the proposed project would not result in a wasteful use of energy. The project would provide housing that is needed to meet the County's housing needs. There would not be a reduction of long-term benefits for short-term gains as a result of the proposed project.

4.10.9 GROWTH INDUCING EFFECTS

Appendix F states that growth inducing effects may include the energy consumption of the growth induced by the project. As stated in **Section 6.0, Other CEQA Considerations**, other than the residents of the project site that would be added to the population of the County, the proposed project would not induce any population or employment growth beyond that anticipated in the General Plan, and therefore there would be no energy consumption related to growth induced by the proposed project.

4.10.10 REFERENCES

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