



6.0 Other CEQA Considerations



6.0 OTHER CEQA CONSIDERATIONS

6.1 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

Pursuant to CEQA Guidelines Section 15126.2, this section analyzes short-term uses of the environment and the maintenance and enhancement of long-term productivity. If the project is approved, implementation of the General Plan Update would involve a variety of short- and long-term impacts on a local level. For example, surrounding uses may be temporarily impacted by dust and noise during future construction activities. Short-term soil erosion may also occur during grading. There may also be an increase in emissions caused by grading and construction activities. However, these disruptions would be temporary and may be avoided or lessened to a large degree through mitigation cited in this EIR and through compliance with the Rancho Santa Margarita Municipal Code; refer to Section 5.0, Environmental Analysis.

Implementation of the General Plan Update would potentially create long-term environmental consequences associated with potential future development. Development associated with implementation of the General Plan Update and the subsequent long-term effects may impact the physical, aesthetic, and human environments. Long-term physical consequences of development include increased traffic volumes, increased noise from project-related mobile (traffic) and stationary (truck ignition and idling, etc.) sources, hydrology and water quality impacts, and increased energy and natural resource consumption. Incremental degradation of local and regional air quality would also occur because of mobile source emissions generated from increased traffic, and stationary source emissions generated from the consumption of natural gas and electricity.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED WITH THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

According to CEQA Guidelines Sections 15126(c) and 15126.2(c), an EIR is required to address any significant irreversible environmental changes that would occur should the proposed project be implemented. As stated in CEQA Guidelines Section 15126.2(c):

"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."

The environmental impacts associated with implementation of the General Plan Update are analyzed in Section 5.0. As of 2016, the majority of the City of Rancho Santa Margarita



is developed. Future development would consume limited, slowly renewable and non-renewable resources. This consumption would occur during each individual project's construction phase and would continue throughout its operational lifetime. Future development would require a commitment of resources that would include: (1) building materials; (2) fuel and operational materials/resources; and (3) the transportation of goods and persons to and from individual development sites. Construction would require the consumption of resources that are not renewable or which may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: lumber and other forest products; aggregate materials used in concrete and asphalt; metals; and water. Fossil fuels such as gasoline and oil would also be consumed to power construction vehicles and equipment.

Development accommodated through implementation of the General Plan Update would consume resources which would be similar to those currently consumed within the City (i.e., energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle-trips, fossil fuels, and water). Fossil fuels would represent the primary energy source associated with both construction and ongoing operation, and the existing, finite supplies of these natural resources would be incrementally reduced. Future development operations would occur in accordance with California Code of Regulations (CCR) Title 24, Part 6, which sets forth conservation practices that would limit energy consumption. Nonetheless, the proposed project's energy requirements would represent a long-term commitment of essentially non-renewable resources.

Construction activities associated with implementation of the General Plan Update could release hazardous materials into the environment through reasonably foreseeable upset and accident conditions; refer to Section 5.10, Hazards and Hazardous Materials. All potential demolition, grading, and excavation activities would be subject to the established regulatory framework as well as Mitigation Measures HAZ-1 through HAZ-4 to ensure that hazardous materials are not released into the environment. Compliance with the established regulatory framework and mitigation measures would protect against a significant and irreversible environmental change resulting from the accidental release of hazardous materials.

In addition, there is the potential that individual future development projects would use and store limited amounts of potentially hazardous materials typical; refer to Section 5.10. All future development activities requiring the routine use, storage, transport, or disposal of hazardous materials would be subject to all applicable Federal, State, and local regulations and standards in place for hazardous materials. Compliance with these regulations and standards would protect against significant and irreversible environmental changes due to the accidental release of hazardous materials.

In conclusion, future construction and operations would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these resource quantities for future generations or for other uses during the life of the individual developments. It is noted that the continued use of such resources would be on a relatively small scale in a regional context. Although irreversible environmental changes would result from project implementation, such changes would not be considered significant.



6.3 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires that an EIR analyze growth-inducing impacts of a project. Specifically, CEQA Guidelines Section 15126.2(d) requires that an EIR:

"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

In general, a project could foster spatial, economic, or population growth in a geographic area if it results in any of the following:

- Removal of an impediment to growth (e.g., establishment of an essential public service and provision of new access to an area);
- Fostering of economic expansion or growth (e.g., changes in revenue base and employment expansion);
- Fostering of population growth (e.g., construction of additional housing), either directly or indirectly;
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning and general plan amendment approval); or
- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an infill project).

Should a project meet any one of the above-listed criteria, it may be considered growth-inducing. Generally, growth-inducing projects are either located in isolated, undeveloped, or underdeveloped areas, necessitating the extension of major infrastructure such as sewer and water facilities or roadways, or encourage premature or unplanned growth. Note that the CEQA Guidelines require an EIR to "discuss the ways" a project could be growth-inducing and to "discuss the characteristics of some projects that may encourage ... activities that could significantly affect the environment." However, the CEQA Guidelines do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages; refer to CEQA Guidelines Section 15145.



In accordance with the CEQA Guidelines and based on the above-listed criteria, the project's potential growth-inducing impacts are evaluated below.

REMOVAL OF AN IMPEDIMENT TO GROWTH

Future development anticipated by the General Plan Update would increase demands for public services (i.e., fire and police protection, schools, parks and recreational facilities, and libraries) and utility and service systems (water, wastewater, stormwater, and solid waste). The City of Rancho Santa Margarita is already served by essential public services and utilities; refer to Section 5.13, Fire Protection, through Section 5.19, Solid Waste. Future individual developments would negotiate cooperative agreements between service agencies/utility providers to address the project's incremental increased demands on public services and utilities. The City's existing network of utilities and service systems, including fire, police, water, wastewater, and solid waste services, would be able to accommodate the anticipated growth and would not need to be upgraded or expanded. Thus, project implementation would not result in a removal of an impediment to growth by establishing an essential public service or utility or service system.

Regional access to the City is provided via State Route 241 (SR-241), SR-133, and Interstate 5. Local access is provided by various arterial highways that intersect the City, including Santa Margarita Parkway, Alicia Parkway, and Antonio Parkway, among others. Project implementation would facilitate transportation improvements within the City necessary to support implementation of the General Plan Update; however, the General Plan roadway network is constructed, except for Plano Trabuco north of Robinson Ranch Road (which is the only facility not at full cross-section width). As discussed in Section 5.4, Traffic and Circulation, future roadway improvements would not provide new access to an area, since both regional and local access is already provided by an existing roadway network. Therefore, implementation of the General Plan Update would not remove an existing impediment to growth through the provision of new access to an area.

ECONOMIC GROWTH

The General Plan Update anticipates a net growth of approximately 428 residential units and 3,085,014 square feet of non-residential development. Construction activities associated with future anticipated development would generate construction jobs. However, these jobs would be temporary and would likely be filled by workers living in the area; therefore, temporary construction jobs would not be growth inducing in this regard. Additionally, the anticipated increase in non-residential development would increase the City's employment base over existing (2016) conditions by approximately 41.2 percent or 6,439 new jobs. This projected employment growth is anticipated to increase sales, with resultant increases in the City's revenue base. Thus, implementation of the General Plan Update would foster economic growth through changes in the revenue base resulting from population and employment growth. Therefore, the proposed project is considered growth inducing with respect to economic expansion.



POPULATION GROWTH

A project could induce population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Although existing roads and infrastructure may be improved/modified, the General Plan Update does not involve the extension of roads or other infrastructure into undeveloped areas; refer to Section 5.4, *Traffic and Circulation*, and the *Impediment to Growth* discussion above. However, the General Plan Update anticipates development of new homes and businesses which would induce direct growth in the City's population.

Implementation of the General Plan Update anticipates the development of 528 additional dwelling units, which would directly increase the City's population by approximately 3.4 percent or 1,692 persons; refer to Table 5.2-14, *General Plan Update Compared to Existing Conditions*. The non-residential development anticipated under the General Plan Update could increase the City's employment base by approximately 41.2 percent or 6,439 jobs. Employment opportunities accommodated through implementation of the General Plan Update could directly increase the City's population, as employees and their families may choose to relocate to the City. However, as discussed in Section 5.2 estimating the number of employees who would relocate to the City would be highly speculative, because many personal factors influence personal housing location decisions (i.e., family income levels and the cost and availability of suitable housing in the local area). There is also the potential that existing residents may fill some of the new positions. Thus, the number of new employees who would relocate to the City because of future employment opportunities is unknown. The General Plan Update anticipates a net growth in the City's housing inventory by approximately 528 dwellings, which could be occupied by new employees who could relocate to the City. The vacancy rates of surrounding cities (Mission Viejo, Lake Forest, Laguna Niguel, Aliso Viejo, and Laguna Woods) range from 3.3 to 13.4 percent and could also accommodate new employees generated from the General Plan Update. As such, it is anticipated that adequate housing would be available to satisfy the housing demand created by new employment opportunities and the construction of more new housing would not be warranted. Overall, the project is considered growth inducing as it would anticipate population growth in the City through development of both new homes and businesses.

Table 5.2-15, *The General Plan Update Compared to SCAG*, compares the General Plan Update growth projections with SCAG's 2040 households, dwelling units, population, and employment growth forecasts for the City. As indicated in Table 5.2-15, the City's projected 2040 population of 51,404 persons would be approximately 5.6 percent greater than SCAG's forecast of 48,700 persons. Similarly, the City's projected housing stock of 18,294 dwelling units and employment of 22,074 employees would be approximately 4.6 percent and 1.3 percent greater than SCAG forecasts of 17,489 dwelling units and 19,500 employees, respectively. General Plan growth projections form the basis of SCAG's planning and policy documents, including regional growth forecasts.¹ Thus, the growth

¹ Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Community Strategy*, Demographics & Growth Forecast Appendix, page 1, December 2015.



anticipated with the General Plan Update would be considered in SCAG's updated growth forecasts for the City. Further, growth anticipated by the General Plan Update would improve the City's jobs/housing balance by providing additional employment opportunities for residents to potentially work in the area. Residents within the area who currently commute outside of the City could potentially remain in the area to work due to the potential availability of approximately 6,439 new jobs. Therefore, the project would beneficially impact the City's jobs/housing balance by improving the jobs/housing ratio when compared to existing conditions.

The General Plan Update accounts for the project's anticipated population growth and establishes goals and policies to accommodate such growth; refer to [Section 5.2](#). Existing utility/service systems, including water, wastewater, electricity, and natural gas services, would accommodate the anticipated growth and would not require any upgrades or expansions.

PRECEDENT-SETTING ACTION

The General Plan Update is a strategic update focused on five elements of the 2002 General Plan. Future development anticipated through project implementation could involve as many as 528 dwelling units and approximately 3.1 million square feet of non-residential uses over existing conditions. However, all future land uses within the City would be developed pursuant to the Land Use Map, Zoning Map, and goals and policies recommended under the proposed General Plan Update. The project would not be considered growth-inducing as it would not involve any changes to the City's existing Land Use Map and therefore would not establish a precedent-setting action.

DEVELOPMENT OR ENCROACHMENT OF OPEN SPACE

The City is largely built-out and consists of developed areas, with relatively little vacant land available for new development. As indicated in [Section 5.11, *Biological Resources*](#), the primary areas of remaining substantive open space include Chiquita Ridge, Trabuco Canyon, Tijeras Canyon, the bluffs encompassed within O'Neill Regional Park in the City's northwestern corner, and much of the area located between Antonio Parkway and the western boundary of Coto de Caza, south of La Promesa. Pockets of undeveloped space are left along the City's eastern boundary in the Robinson Ranch and Dove Canyon areas. In addition, SR-241 provides multiple wildlife undercrossings and areas to the south provide additional wilderness access into the southern Santa Ana Mountains. The project would not involve development that would encroach on an isolated area of open space. Therefore, the proposed project is not considered growth inducing with respect to development of or encroachment on an isolated or adjacent area of open space.

SUMMARY

Overall, implementation of the General Plan Update would not be growth-inducing with respect to removing an impediment to growth (i.e., establishing an essential public service or through providing new access to the area), establishing a precedent-setting action, or through encroaching on an isolated area of open space. However, the project is considered growth-inducing with respect to fostering economic and population growth. The population, housing, and employment growth anticipated by



implementation of the General Plan Update would be greater than SCAG's projections for the City; however, the non-residential development anticipated is less than currently anticipated by the existing General Plan. The General Plan Update accounts for the project's anticipated population growth and establishes goals and policies to accommodate such growth. Further, the forecast population increase would occur incrementally through 2040, allowing for development of necessary services and infrastructure commensurate with the proposed growth.

At the regional level, the emphasis regarding growth has been placed primarily on achieving a balance of employment and housing opportunities within the subregions. This regional concept, referred to as jobs/housing balance, encourages the designation and zoning of sufficient vacant land for residential uses with appropriate standards to ensure adequate housing is available to serve the needs derived from the local employment base. The jobs/housing ratio can be used as the general measure of balance between a community's employment opportunities and the housing needs of its residents. A ratio of 1.0 or greater generally indicates that a city provides adequate employment opportunities, potentially allowing its residents to work within the city. A desirable jobs/housing balance improves regional mobility (traffic), reduces vehicle miles traveled, and improves air quality. Conversely, imbalance between a city's jobs and housing increases commutes, with resultant increases in traffic volumes and air emissions, and overall reduces the quality of life.

Under existing conditions, the City's jobs/housing ratio is approximately 0.88, indicating the City provides fewer employment opportunities for its residents, typically resulting in residents to commute outside of the area for employment.² Implementation of the General Plan Update would increase the City's existing housing inventory by 4.6 percent (528 new dwelling units) and employment by approximately 41.2 percent (6,439 new jobs). With implementation of the General Plan Update, the City's jobs/housing ratio would be approximately 1.21, indicating that the General Plan Update would result in an improved job to housing balance for the City and subregion. Thus, the General Plan Update would allow for increased employment opportunities for its residents. While the General Plan Update would induce growth in the City over existing conditions, this is considered a beneficial impact.

6.4 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a

² Based on 15,635 jobs and 17,766 dwelling units (Existing 2016).



project. Thereafter, the State Resources Agency Created Appendix F of the State CEQA Guidelines.

State CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The discussion below analyzes the proposed project's effect on energy consumption and impacts on energy resources.

6.4.1 ENVIRONMENTAL SETTING

Energy consumption is analyzed in this EIR due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both the construction³ and long-term operational phases.

ELECTRICITY/NATURAL GAS SERVICES

Southern California Edison (SCE) provides electrical services to Orange County through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). One MW provides enough energy to power 1,000 average California homes per day. Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

The Southern California Gas Company (SCG) provides natural gas services to Orange County. Natural gas is a hydrocarbon fuel found in reservoirs beneath the earth's surface and is composed primarily of methane (CH₄). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants that are fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. Nearly 45 percent of the electricity consumed in California was generated using natural gas.⁴ While the supply of natural gas in the United

3 It should be noted that the General Plan Update identifies future land uses and does not contain specific development proposals. Therefore, energy associated with construction is speculative and cannot be accurately determined at this stage of the planning process. As a result, a construction energy analysis has not been included as part of Section 6.4, Energy Conservation (CEQA Guidelines Section 15145).

4 California Energy Commission, *Supply and Demand of Natural Gas in California*, http://www.energy.ca.gov/almanac/naturalgas_data/overview.html, accessed August 14, 2018.



States and production has increased greatly, California produces little, and imports 90 percent of its natural gas.⁵

Electricity and natural gas service is available to locations where land uses could be developed. The City's ongoing development review process includes a review and comment opportunity for privately owned utility companies, including SCE, to allow informed input from each utility company on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

ENERGY USAGE

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,830 trillion BTU's in 2016 (the most recent year for which this specific data is available), which equates to an average of 199 million BTU's per capita. Of California's total energy usage, the breakdown by sector is 39 percent transportation, 24 percent industrial, 19 percent commercial, and 18 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.⁶ In 2017, taxable gasoline sales (including aviation gasoline) in California accounted for 15,540,154,774 gallons of gasoline.⁷

The electricity consumption attributable to Orange County from 2007 to 2016 is shown in Table 6-1, Electricity Consumption in Orange County 2007-2016. As indicated in Table 6-1, energy consumption in Orange County remained relatively constant between 2007 and 2016, with no substantial increase.

The natural gas consumption attributable to Orange County from 2007 to 2016 is shown in Table 6-2, Natural Gas Consumption in Orange County 2007-2016. Similar to energy consumption, natural gas consumption in Orange County remained relatively constant between 2007 and 2016, with no substantial increase.

5 Ibid.

6 U.S. Energy Information Administration, *California State Profile and Energy Estimates*, <https://www.eia.gov/state/print.php?sid=CA>, accessed August 14, 2018.

7 California Department of Tax and Fee Administration, *Fuel Taxes Statistics and Report: Net Taxable Gasoline Gallons*, <http://www.cdtfa.ca.gov/taxes-and-fees/MVF-10-Year-Report.pdf>, accessed August 14, 2018.



Table 6-1
Electricity Consumption in Orange County 2007-2016

Year	Electricity Consumption (in millions of kilowatt hours)
2007	21,096
2008	21,514
2009	20,651
2010	19,788
2011	20,009
2012	20,620
2013	20,389
2014	20,827
2015	20,927
2016	20,391

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed August 14, 2018.

Table 6-2
Natural Gas Consumption in Orange County 2007-2016

Year	Natural Gas Consumption (in millions of therms)
2007	643
2008	632
2009	611
2010	635
2011	639
2012	612
2013	636
2014	544
2015	544
2016	569

Source: California Energy Commission, *Gas Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed August 14, 2018.

Automotive fuel consumption in Orange County from 2007 to 2017 is shown in [Table 6-3, *Automotive Fuel Consumption in Orange County 2007-2018*](#) (projections for the year 2018 are also shown). As shown in [Table 6-4](#), on-road automotive fuel consumption in Orange County has declined steadily, since 2007.

Table 6-3
Automotive Fuel Consumption in Orange County 2007-2018

Year	On-Road Automotive Fuel Consumption (Gallons)
2007	1,423,778,297
2008	1,365,076,979
2009	1,357,149,650
2010	1,363,676,577
2011	1,349,691,464
2012	1,323,464,829
2013	1,309,170,033
2014	1,310,499,602
2015	1,302,220,609
2016	1,295,517,278
2017	1,280,170,453
2018 (projected)	1,248,703,310

Source: California Air Resources Board, EMFAC2014.



6.4.2 REGULATORY SETTING

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process.

STATE OF CALIFORNIA

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

In 1978, the CEC established Title 24, California's energy efficiency standards for residential and non-residential buildings, in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. In 2013, the CEC updated Title 24 standards with more stringent requirements. The 2016 standards substantially reduce electricity and natural gas consumption. Additional savings result from the application of the standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional electricity. These savings are cumulative, doubling as years go by. The 2016 standards have been approved and went into effect on January 1, 2017. California's energy efficiency standards are updated on an approximate three-year cycle.

CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a Statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2016 and went into effect January 1, 2017.

RECENT CEQA LITIGATION

In California, *Clean Energy Committee v. City of Woodland* (2014) 225 Cal.App.4th 173 ("CCEC"), the Court observed that CEQA Guidelines Appendix F lists environmental impacts and mitigation measures that an EIR may include. CEQA Guidelines Appendix F, Section II(C) states that EIR's may include the following energy impacts:⁸

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation,

8 Association of Environmental Professionals, *2018 CEQA California Environmental Quality Act Statute & Guidelines*, <https://www.califaep.org/images/ceqa/statute-guidelines/2018/2018-CEQA-Guidelines.pdf>, accessed August 14, 2018.



maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Given the programmatic nature of the General Plan Update, only those impacts detailed under Section 6.4.4, *Energy Consumption*, are analyzed.

6.4.3 STANDARDS OF SIGNIFICANCE

In accordance with CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to Appendix F of the CEQA Guidelines, the proposed project would have a significant impact related to energy, if it would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with the project, collectively reviewed as transportation energy demands and building energy demands.

6.4.4 ENERGY CONSUMPTION

Energy consumption associated with the proposed project is summarized in Table 6-4, *Energy Consumption*. As shown in Table 6-4, the electricity usage as a result of the project would constitute an approximate 1.07 percent increase over Orange County's typical annual electricity consumption and an approximate 0.69 percent increase in the typical annual natural gas consumption in Orange County. The project-related vehicle fuel consumption would increase Orange County's consumption by 1.74 percent.



**Table 6-4
Energy Consumption**

Energy Type	Project Annual Energy Consumption	Orange County Annual Energy Consumption ^{1,2}	Percentage Increase Countywide
Electricity Consumption	218,836 MWh	20,391,000 MWh	1.07%
Natural Gas Consumption	3,944,797 therms	569,000,000 therms	0.69%
Fuel Consumption ³	21,724,046 gallons	1,248,703,310 gallons	1.74%

Notes:

1. The increases in electricity and natural gas consumption are compared with the total consumption in Orange County in 2016.
2. The increases in automotive fuel consumption are compared with the countywide fuel consumption in 2018.
3. Countywide fuel consumption is from the California Air Resources Board EMFAC2014 model.

OPERATIONAL ENERGY CONSUMPTION

Energy Demand

TRANSPORTATION ENERGY DEMAND

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. [Table 6-4](#) provides an estimate of the daily fuel consumed by vehicles traveling throughout the City. As indicated in [Table 6-4](#), project operations are estimated to consume approximately 21,724,046 gallons of fuel per year, which would increase Countywide automotive fuel consumption by 1.74 percent. The project would not introduce any land uses that could result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

BUILDING ENERGY DEMAND

The proposed project would be expected to demand approximately 218,836 million kilowatt hours (kWh) of electricity per year and approximately 3,944,797 therms of natural gas per year. The proposed project would be required to comply with Title 24 Building Energy Efficiency Standards, which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage. Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS 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 and to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures projects will not result in the waste of the finite energy resources.



As indicated in Table 6-4, operational energy consumption would represent an approximate 1.07 percent increase in electricity consumption over the current Countywide usage. The project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards. As such, the project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

ENERGY EFFICIENCY MEASURES

Title 24, *California's Energy Efficiency Standards for Residential and Non-residential Buildings*, was established by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings through the State, including Rancho Santa Margarita. In 2016, the CEC updated Title 24 standards with more stringent requirements. The 2016 Standards were incorporated within the California Building Code and are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional electricity. These savings are cumulative, doubling as years go by. Additionally, starting in 2020, all new homes constructed in California are required to include solar panels, per the CEC's 2019 Building Energy Efficiency Standards.⁹

CONCLUSION

As shown in Table 6-4, the increase in electricity and automotive fuel consumption over existing conditions is minimal. The increase in automotive fuel consumption is approximately 1.74 percent over existing consumption in Orange County. While there is no accepted industry standard for 'wasteful, inefficient, and unnecessary consumption of energy,' the anticipated 1.74 percent increase in energy consumption in the County is nominal and would not result in any substantial impacts to existing energy supplies. For the reasons described above, implementation of the General Plan Update would not cause wasteful, inefficient, and unnecessary consumption of energy or require construction of new or retrofitted buildings that would have excessive energy requirements for daily operation.

⁹ California Energy Commission, *Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation*, May 9, 2018, http://www.energy.ca.gov/releases/2018_releases/2018-05-09_building_standards_adopted_nr.html, accessed on August 15, 2018.