

4.6 ENERGY

This section evaluates the potential effects of implementing the 2040 General Plan on energy consumption including whether it would result in an environmental impact due to the wasteful, inefficient or unnecessary consumption of energy resources and whether it would conflict with or obstruct State or local plans for renewable energy and energy efficiency. As described in the “Approach to the Environmental Analysis” section, above, the following assessment of impacts is based on the characterization of existing environmental conditions and regulatory setting provided in the January 2020 Background Report (Appendix B). Where necessary, each section identifies changes (e.g., new information, regulatory changes) to the environmental and regulatory setting included in the Background Report that are relevant to understanding the 2040 General Plan’s potential impacts.

Comments on the notice of preparation both expressed support for transitioning from natural gas to renewable energy sources and the importance of local energy production. These comments are addressed in this section, as appropriate. The NOP and comments on the NOP are included in Appendix A. For a discussion of the potential impacts of the 2040 General Plan related to oil and gas extraction, refer to Section 4.12, “Mineral and Petroleum Resources,” of this draft EIR.

4.6.1 Background Report Setting Updates

REGULATORY SETTING

In addition to the information provided in Chapter 12, “Climate Change,” the Background Report (Appendix B), the following information is relevant to understanding the potential energy impacts of implementation of the 2040 General Plan:

Ventura County Regional Energy Alliance

The Ventura County Regional Energy Alliance (VCREA) is an organization funded by the California Public Utilities Commission (CPUC), via investor owned utilities, that has served as a regional Joint Powers Authority since 2002 to address energy planning, conservation and reliability. VCREA’s mission is “to establish Ventura County, its communities and neighboring regions as the leader in developing and implementing durable, sustainable energy initiatives that support sensible growth, healthy environment and economy, enhanced quality of life, and greater self-reliance for the region.” These objectives are to be achieved by “reducing energy demand and increasing energy efficiency and advancing the use of clean, efficient and renewable local resources” (VCREA 2019a). Goals for the organization include:

- ▶ Lead and coordinate regional integrated energy resource planning.
- ▶ Develop a long-term, sustainable energy strategy and implementation plan.
- ▶ Develop regional capability to respond to energy emergencies and short-term disruptions.
- ▶ Increase awareness of and access to conservation, efficiency, and renewable opportunities.
- ▶ Add value to, but not duplicate, services offered by public utilities and other regional providers.

- ▶ Inform decision makers and stakeholders of energy policy, regulatory, and market changes.
- ▶ Empower Ventura County to lead in research, development, demonstration, innovation, and commercialization of sustainable energy technologies.

VCREA's agency partners at the regional level include the cities of Camarillo, Fillmore, Ojai, Oxnard, Port Hueneme, Santa Paula, Simi Valley, Thousand Oaks, and Ventura. Other regional partners include the South County Energy Efficiency Partnership, the San Luis Obispo Regional Energy Alliance, emPower Central Coast, Central Coast Energy Alliance, and the U.S. Green Building Council central coast chapter. Utility partners include Southern California Edison (SCE) and Southern California Gas Company (SoCalGas). Statewide organizations listed as VCREA partners include the California Energy Commission (CEC), the Local Government Commission, the Institute for Local Government, the CPUC's Statewide Energy Efficiency Collaborative, and the California Green Business Network (VCREA 2019b).

California Renewables Portfolio Standard Program

Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002) established a renewable portfolio standard (RPS) for Statewide retail electricity, requiring that utilities procure 20 percent of their marketed electricity from renewable energy sources. Subsequent legislation increased the percentage of renewable energy required, set specific target years, and expanded the types of entities covered under the RPS. The State has reported that 34 percent of Statewide retail electricity was sourced from certified renewable sources in 2018 (CEC 2019). The current RPS targets, revised in 2018 under SB 100, require that electric utilities provide 44 percent of retail sales from renewable energy sources by December 31, 2024, 50 percent by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 also introduced a requirement that 100 percent of retail sales of electricity come from zero-carbon energy sources by December 31, 2045.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required the CEC to: "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety" (Public Resources Code Section 25301(a)). This work is published biannually in an Integrated Energy Policy Report (IEPR), with updates published in intervening years. The latest full version of the report was published in 2017, and an update was published in 2018 (CEC 2017, 2018).

The 2017 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Topics covered in the report include:

- ▶ progress toward Statewide renewable energy targets;
- ▶ issues facing future renewable development;
- ▶ efforts to increase energy efficiency in existing and new buildings;
- ▶ progress by utilities in achieving energy efficiency targets and potential;
- ▶ improving coordination among the State's energy agencies;

- ▶ streamlining power plant licensing processes;
- ▶ results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand;
- ▶ future energy infrastructure needs;
- ▶ research and development efforts for Statewide energy policies; and
- ▶ issues facing California's power plants.

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act was created in response to the State legislature's review of studies projecting an increase in Statewide energy demand, which would potentially encourage the development of electricity producing power plants in environmentally sensitive areas. The Act introduced State policy for siting power plants to reduce potential environmental impacts, and additionally sought to reduce demand for these facilities by directing CEC to develop Statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures established by the Act included design standards for energy conservation in buildings, resulting in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code) and Title 20 Appliance Efficiency Regulations. Approval of the Act also introduced into Public Resources Code Section 21100 a requirement for lead agencies preparing EIRs to include a detailed statement about proposed measures to reduce the wasteful, inefficient and unnecessary consumption of energy necessary to minimize significant effects on the environment.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030. Achieving these savings are the responsibility of the State's regulated utilities, who submit to the CPUC an Integrated Resource Management Plan (IRP) describing how energy efficiency savings will be achieved through a variety of programs.

Assembly Bill 2076

Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), required the CEC to perform studies analyzing the feasibility of a strategic fuel reserve to serve as a contingency for possible shortages of electrical energy or fuel supplies. As part of this effort the CEC and CARB prepared a joint agency report, *Reducing California's Petroleum Dependence*. The introduction to this report states that need to reduce dependence on petroleum is due, in part, to the Statewide demand for fossil fuels outpacing the refining capacity of the State. This increased demand is met through the import of petroleum products from outside California, creating long-term susceptibility to gasoline price volatility. This report prepared for the Governor and Legislature recommended the following strategies for reducing the State's dependence on petroleum.

- ▶ Reduce demand for on-road gasoline and diesel to 15 percent below the 2003 demand level by 2020 and maintain that level for the foreseeable future.
- ▶ Work with the California delegation and other states to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks and SUVs.

- ▶ Establish a goal to increase the use of non-petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other State, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs and maximizes the economic benefits of in-State production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-State production of biofuels.

California Building Energy Efficiency Standards

The energy consumption of new residential and nonresidential buildings in California is regulated by the State's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code 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. Implementation of these standards results in the generation of fewer GHG emissions during building operation. The CEC updates the California Energy Code every 3 years. The 2019 California Energy Code was adopted by the CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. The 2019 Code is designed to move the State closer to its zero-net energy goals for new residential development. It does so by requiring all new residences to install solar photovoltaic panels sized to offset all of the electricity needs of each residential unit (CCR, Title 24, Part 6, Section 150.1(c)4). The Code is enforced through the local plan check and building permit processes. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

ENVIRONMENTAL SETTING

In addition to the information provided in Chapter 12, "Climate Change," the Background Report (Appendix B), the following information is relevant to understanding the potential energy impacts of implementation of the 2040 General Plan:

Electricity Services

Electric services in unincorporated Ventura County are provided by SCE and the Clean Power Alliance (CPA). SCE is an Investor Owned Utility (IOU) that provides electricity service and distribution to residents and businesses in Ventura County. CPA is a Community Choice Aggregation (CCA) that provides electricity service as an alternative to SCE. CPA was founded in 2017 as a Joint Powers Authority operated by several public agencies in Southern California. In 2018, the County became a member of the organization, and in early 2019 transferred service for most residential and commercial electricity customers from SCE to this CPA. Table 4.6-1 provides information on the distribution of customers receiving electric service in the county. This information is relevant because CCAs are marketed as utilities that procure electricity with a greater share of zero carbon and renewable energy sources than IOUs. For the county this is true, as shown in 4.6-2 which itemizes the power content of

electricity sold by each utility through their program offerings. CPA’s “Green Power” product is derived from 100 percent wind energy, and serves 83.1 percent of eligible customers in the county, as of August 2019. For comparison, the share of electricity generated by SCE using renewable energy or zero carbon sources is 46 percent and serves 11.9 percent of eligible customers in the county as of August 2019. Prior to the availability of CPA in early 2019, SCE’s electricity generation served all customers in the county.

Table 4.6-1 Unincorporated Ventura County Electric Utility Program Enrollment

Electric Utility / Rate Option	Residential Customers		Non-Residential Customers		Total Customers (Residential and Non-Residential)	
	%	Number	%	Number	%	Number
Southern California Edison / Standard	10.7	3,349	17.1	1212	11.9	4,561
Clean Power Alliance / Green Power	84.1	26,257	78.6	5,586	83.1	31,843
Clean Power Alliance / Lean Power	4.3	1,345	3.1	217	4.1	1,562
Clean Power Alliance / Clean Power	0.8	262	1.3	95	<1	357
Total Accounts		31,214		7,110	100	38,323
Total Clean Power Alliance	89.3	27,864	83.0	5,898	88.1	33,762

Notes: Data are from August 2019. Clean Power Alliance Green Power is the default rate option for enrollment in the program. Other rate options are the result of customers opting out.

Source: Clean Power Alliance 2019

4.6.2 Environmental Impacts and Mitigation Measures

METHODOLOGY

Energy consumption resulting from future development under the 2040 General Plan would include energy directly consumed for space heating and cooling, electricity- and gas-powered equipment (including industrial equipment), and interior and exterior lighting of buildings (residential and commercial) in the plan area. Indirect energy consumption resulting from future development under the proposed plan would include fuels consumed for the generation of electricity at power plants and the energy used for the treatment of water and the transportation of water to and from the plan area. Transportation-related energy consumption includes the fuels and electricity used to power automobiles, trucks, busses, railways, ridesharing. It also includes heavy duty mobile machinery, such as farm equipment and forklifts. Energy would also be consumed by equipment and vehicles used during construction and maintenance of roadways, buildings, and landscaping. As a general plan, a programmatic approach is used for evaluating potential impacts that relies primarily on a qualitative analysis supported by figures showing levels of fuel consumption.

THRESHOLDS OF SIGNIFICANCE

As discussed in the “Approach to the Environmental Analysis” section, the thresholds used to determine the significance of the 2040 General Plan’s impacts are based on the County’s adopted ISAG, which include threshold criteria to assist in the evaluation of significant impacts for individual projects. Appendix G of the State CEQA Guidelines also provides considerations for determining the significance of a project’s impacts, in the form of initial study checklist questions.

To develop thresholds of significance for this section of the draft EIR, the County has deviated from the ISAG threshold criteria, where appropriate, to appropriately consider the programmatic nature of a general plan for the entire unincorporated area and to incorporate the 2019 revisions to the Appendix G checklist.

The ISAG does not include thresholds for analyzing energy impacts. Therefore, to develop a threshold of significance for this section of the draft EIR, the County has incorporated the 2019 revisions to Appendix G checklist questions VI.a and VI.b addressing wasteful, inefficient, or unnecessary energy consumption and conflicts with State or local plans for renewable energy or energy efficiency. Because the ISAG does not include threshold criteria for energy impacts, the State CEQA Guidelines checklist questions for energy contained in Appendix G, Section VI is used in this analysis.

For the purpose of this Draft EIR, implementation of the impact on energy resources would be significant if implementation of the 2040 General Plan would:

- ▶ Result in the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation that would cause a potentially significant effect on the environment.
- ▶ Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

ISSUES NOT DISCUSSED FURTHER

Section 15126.2(b) of the State CEQA Guidelines states that the consideration and discussion of energy impacts is subject to the rule of reason. The Statement of Reasons for Regulatory Action for the 2019 CEQA Guidelines clarifies the intent of this rule by stating “...the analysis of energy impacts is subject to the rule of reason and must focus on energy demand caused by the project. This sentence is necessary to place reasonable limits on the analysis. Specifically, it signals that a full ‘lifecycle’ analysis that would account for energy used in building materials and consumer products will generally not be required.”

This section does not analyze the potential, secondary environmental effects of energy consumption for topics already covered in other sections of this EIR, including air quality (Section 4.3), greenhouse gases (Section 4.8), transportation (Section 4.16), and utilities (section 4.17).

The Area Plans for communities of El Rio/Del Norte, Lake Sherwood/Hidden Valley, North Ventura Avenue, Oak Park, Ojai Valley, Piru, and Thousand Oaks were reviewed for policies and implementation programs specific to these Area Plans that would potentially have impacts on the environment with respect to energy. The 2040 General Plan would not result in substantive changes to Area Plan policies and implementation programs related to energy. The Area Plan policies and implementation programs related to these issues are consistent with the policies and implementation programs of the 2040 General Plan, which are addressed

in the following impact discussions. Therefore, the environmental effects of the Area Plan policies and implementation measures are not addressed separately in this section.

2040 GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS

2040 General Plan policies and implementation programs related to energy consumption and, specifically, the thresholds of significance identified above, include the following:

Land Use and Community Character Element

- ▶ **Policy LU-1.1: Guidelines for Orderly Development.** The County shall continue to promote orderly and compact development by:
 - working with cities in Ventura County and the Ventura Local Agency Formation Commission (LAFCo) to promote and maintain reasonable city boundaries and Spheres of Influence to prevent growth-inducing urban development in unincorporated areas, and
 - require unincorporated urban development to be located in areas designated as Existing Communities and unincorporated urban centers consistent with the Guidelines for Orderly Development and as defined in Policy LU-1.2. (RDR, IGC)
- ▶ **Policy LU-11.3: Design.** The County shall require new commercial and industrial developments to be designed to be generally compact, grouped and consolidated into functional units providing for sufficient off-street parking and loading facilities, maximize pedestrian and vehicle safety, reduce vehicle miles traveled (VMT), encourage electric vehicle charging, and minimize land use conflicts and traffic congestion. The County shall require that commercial and industrial discretionary development is designed to provide adequate buffering (e.g., walls, landscaping, setbacks) and operational conditions (e.g., hours of operation, and scheduling of deliveries) to minimize adverse impacts (e.g., noise, glare, and odors) on adjoining and adjacent residential areas.
- ▶ **Policy LU-11.4: Sustainable Technologies.** The County shall encourage discretionary development on commercial- and industrial- designated land to incorporate sustainable technologies, including energy- and water-efficient practices and low- or zero-carbon practices.
- ▶ **Policy LU-16.5: Multimodal Access to Commercial Development.** The County shall encourage discretionary commercial development to promote ease of pedestrian/bicycle access to encourage walk-in business, while providing sufficient off-street parking.
- ▶ **Policy LU-16.9: Building Orientation and Landscaping.** The County shall encourage discretionary development to be oriented and landscaped to enhance natural lighting, solar access, and passive heating or cooling opportunities to maximize energy efficiency.

Implementation Programs

- ▶ **Implementation Program A: Guidelines for Orderly Development Implementation.** The County shall continue to implement the Guidelines for Orderly Development and work with cities to promote orderly and compact, increased options for affordable housing, lower vehicle miles traveled, and limit sprawl.

Circulation, Transportation and Mobility Element

- ▶ **Policy CTM-2.1: Complete Streets.** The County shall prepare and adopt Complete Streets Design Guidelines to be used when constructing new roadways or improving existing roadways where Complete Streets would be appropriate/feasible. The Complete Streets Design Guidelines shall employ a context-sensitive approach to planning and designing the

road and street network to reflect the distinct agricultural, rural, or urban character of a particular location.

- ▶ **Policy CTM-2.8: Congestion Management Program and County Regional Network Consistency.** For those portions of the County’s Regional Road Network currently not designated as part of the Congestion Management Program (CMP), the County shall coordinate with Ventura County Transportation Commission (VCTC) to formally designate applicable County maintained roadways as part of the CMP.
- ▶ **Policy CTM-2.11: Efficient Land Use Patterns.** The County shall establish land use patterns that promote shorter travel distances between residences, employment centers, and retail and service-oriented uses to support the use of public transportation, walking, bicycling, and other forms of transportation that reduce reliance on single-passenger automobile trips.
- ▶ **Policy CTM-2.12: Countywide Bicycle Lane and Trail System.** The County shall coordinate with the cities in the county and Ventura County Transportation Commission (VCTC) to plan and implement a system of bicycle lanes and multi-use trails that link the cities, unincorporated communities, schools including colleges and universities, commercial/retail, employment centers, health care service facilities, public transportation, and other points of interest.
- ▶ **Policy CTM-2.13: Transportation System Connectivity.** The County shall strive to eliminate “gaps” in roadways, bikeways, and pedestrian networks by planning for and seeking funding to construct necessary improvements to remove barriers and improve transportation system connectivity as well as connections that support first and last mile accessibility to and from public transportation.
- ▶ **Policy CTM-2.14: Bicycle Facility Design.** When designing new bicycle facilities, or modifying existing roadways with bicycle facilities, the County shall prioritize and install features to improve the safety and visibility of bicyclists.
- ▶ **Policy CTM-2.15: Bicycle/Pedestrian Design.** The County shall rely on the guidelines and design standards for bicycle and pedestrian facilities established by the California Manual on Uniform Traffic Control Devices (CAMUTCD) and supporting guidelines provided the Federal Highway Administration, Caltrans, and the American Association of State Highway and Transportation Officials (AASHTO).
- ▶ **Policy CTM-2.17: Support Regional Bicycle Infrastructure.** The County shall support efforts to improve infrastructure that will make biking more attractive to residents and tourists.
- ▶ **Policy CTM-2.18: Complete Streets Standards in Existing Communities.** The County shall require discretionary development in designated Existing Communities to construct roadways to urban standards and Complete Streets principles, including curb, gutter, sidewalks, and bike lanes when there is a nexus for improvement. The County shall rely on the guidelines and design standards for Complete Streets design established by the California Manual on Uniform Traffic Control Devices (CAMUTCD), Caltrans in the Highway Design Manual, and Complete Streets Guidelines (pursuant to Deputy Directive-64-R2), Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO).

- ▶ **Policy CTM-2.21: Pedestrian/Bicycle Conflicts along Overweight Vehicle Corridor and Surface Transportation Assistance Act (STAA) Truck Routes.** Within Existing Communities, the County shall provide/retrofit separated or buffered pedestrian and bicycle paths from the outside travel lane along County Road Network roads that are designated Overweight Vehicle Corridors and STAA designated Terminal Access Routes. Where the application or retrofitting of separated or buffered facilities is not feasible, the County shall prioritize alternative pedestrian and bicycle connections that encourage and attract pedestrian and bicycle traffic off designated Overweight Vehicle Corridors or STAA designated truck routes. (MPSP)
- ▶ **Policy CTM-2.22: Funding and Maintenance for Sidewalks.** The County shall seek funding sources first for construction of new sidewalks in designated disadvantaged communities and then for sidewalk maintenance, particularly in low-income areas.
- ▶ **Policy CTM-2.23: Intercommunity and Countywide Public Transportation System.** The County shall continue to work with Ventura County Transportation Commission (VCTC), Naval Base Ventura County, and local public transportation regional bus service providers to promote the expansion of a safe, efficient, convenient, integrated, and cost-effective intercommunity and countywide public transportation and bus service that provides county residents with access to employment, commercial services, health and medical facilities, social services, educational facilities and institutions, and personal business destinations.
- ▶ **Policy CTM-2.24: Non-Drivers Living in Rural Areas.** The County shall work with Ventura County Transportation Commission (VCTC) and local public transportation providers to address the needs of non-drivers living in rural areas to provide public transportation and paratransit service.
- ▶ **Policy CTM-2.25: Amtrak Service Improvements.** The County shall support the recommendations of the California State Rail Plan for Amtrak trains, including track and signalization upgrades, increasing service frequencies by adding additional round-trip service to regional destinations north and south of Ventura County, improving passenger information and comfort, and reducing travel time.
- ▶ **Policy CTM-2.26: Abandoned Railroad Rights-of-Way.** When railroad rights-of-way are abandoned, the County shall evaluate the feasibility of acquiring the land for public use as public transportation, bicycle, pedestrian, or equestrian paths.
- ▶ **Policy CTM-2.27: Discretionary Development and Conditions of Approval to Minimize Traffic Impacts.** The County shall require that discretionary development be subject to the following permit conditions of approval, where feasible, to minimize traffic impacts by incorporating pedestrian and bicycle pathways, bicycle racks and lockers, ridesharing programs, transit improvements (bus turnouts, shelters, benches), and/or transit subsidies for employees or residents of the proposed development.
- ▶ **Policy CTM-3.1: Bicycle Network Strategy and Prioritization.** The County shall identify and prioritize components of a bicycle network to increase public access and ridership on bicycle routes.
- ▶ **Policy CTM-3.2: Inclusive Bicycle Network.** The County shall develop a bicycle network for all user types and routes across the county.

- ▶ **Policy CTM-3.3: Regional Destination Focus for Bicycle Network.** The County shall encourage the development of a bicycle network that connects to regional destinations such as parks, trails, educational institutions, employment centers, transit, park and ride lots, and tourist destinations.
- ▶ **Policy CTM-3.4: Interjurisdictional Bicycle Network Connectivity.** The County shall promote bicycle network connectivity between Ventura County communities as well as Santa Barbara and Los Angeles Counties.
- ▶ **Policy CTM-3.5: Bicycle Routes in Rural Areas.** The County shall plan for bicycle network connectivity in rural, agricultural, and open space areas in a way that supports and complements business and agricultural activities in those areas.
- ▶ **Policy CTM-3.6: Coordination with Bicycle Wayfinding Plan.** The County shall support the Complete Streets effort by when feasible, constructing bicycle lanes on County maintained roads listed in the Ventura County Transportation Commission Bicycle Wayfinding Plan.
- ▶ **Policy CTM-3.7: Bicycle Trail along Santa Paula Branch Line.** The County shall encourage the construction of a bicycle trail along the Santa Paula Branch Line Railroad in the unincorporated area between the cities of Ventura and Santa Paula.
- ▶ **Policy CTM-3.8: Bicycle Network Routes and Wayfinding.** The County shall use clear and consistent message and placement for on- and off-street regional bikeways and to regional destinations.
- ▶ **Policy CTM-3.9: Funding for Bicycle Network and Wayfinding Planning and Improvements.** The County shall actively pursue outside funding opportunities for bicycle network improvements.
- ▶ **Policy CTM-3.10: Bicycle Storage Facilities.** The County shall require adequate bicycle storage facilities (e.g., bicycle racks, lockers) for discretionary development as determined by allowable land uses at a given site.
- ▶ **Policy CTM-4.1: Reduce Vehicle Miles Traveled (VMT).** The County shall work with Caltrans and Ventura County Transportation Commission (VCTC) to reduce VMT by:
 - facilitating the efficient use of existing transportation facilities;
 - striving to provide viable modal choices that make driving alone an option rather than a necessity;
 - supporting variable work schedules to reduce peak period VMT; and
 - providing more direct routes for pedestrians and bicyclists.
- ▶ **Policy CTM-4.2: Alternative Transportation.** The County shall encourage bicycling, walking, public transportation, and other forms of alternative transportation to reduce Vehicle Miles Traveled (VMT), traffic congestion, and greenhouse gas emissions.
- ▶ **Policy CTM-4.3: Vehicle Occupancy.** The County shall work with a broad range of agencies (e.g., Caltrans, Ventura County Transportation Commission (VCTC), Amtrak, Ventura County Air Pollution Control District, public transportation providers and shared mobility vendors) to encourage and support programs that increase vehicle occupancy including the provision of traveler information, shuttles, and preferential parking for carpools/vanpools.

- ▶ **Policy CTM-4.4: Park-and-Ride Facilities.** The County shall coordinate with Caltrans and Ventura County Transportation Commission (VCTC) to identify future park-and-ride lots within the unincorporated areas of Ventura County to facilitate more carpooling, vanpooling, and public transportation use.
- ▶ **Policy CTM-6.1: Routine Use of Alternative Transportation Options.** The County shall support the integration of emerging technologies that increase the routine use of alternative transportation options to decrease single-passenger automobile travel.
- ▶ **Policy CTM-6.4: Facilities for Emerging Technologies.** The County shall support the development of alternative fueling stations (e.g., electric and hydrogen) and vehicle-to-infrastructure (V2I) technology for emerging technologies.
- ▶ **Policy CTM-6.5: Electric Vehicle Charging Stations.** The County shall support the installation of electric vehicle charging stations, where feasible, at County facilities, parking lots, park-and-ride lots, truck stops, and new development.
- ▶ **Policy CTM-6.6: Neighborhood Electric Vehicles.** The County shall encourage developments and street systems that support the use of properly licensed Neighborhood Electric Vehicles where appropriate.
- ▶ **Policy CTM-6.7: Shared Mobility Operations.** The County shall encourage and support car share operators at multimodal facilities including public transportation hubs, passenger rail stations, and park-and-ride lots.
- ▶ **Policy CTM-6.8: Micro-Mobility Operations.** The County shall evaluate the feasibility and work to establish requirements for shared micro-mobility (e.g., bike sharing) vendors within unincorporated areas.
- ▶ **Policy CTM-6.9: Mobility-as-a-Service Enterprises – Vehicle Operations.** The County shall encourage Mobility-as-a-Service providers to park between service calls versus driving within unincorporated communities.
- ▶ **Policy CTM-6.10: Mobility-as-a-Service Enterprises – Support Public Transportation.** The County shall encourage Mobility-as-a-Service providers to coordinate with public transportation providers that serve unincorporated areas to increase the attractiveness of public transportation through the provision of free or subsidized public transportation patron first and last mile connections within unincorporated communities.

Implementation Programs

- ▶ **Implementation Program A: Traffic Impact Mitigation Fee Program.** The County shall update its Traffic Impact Mitigation Fee program and perform a comprehensive update to the program every five (5) years pursuant to Government Code section 66000 et seq.
- ▶ **Implementation Program B: Initial Study Assessment Guidelines.** The County shall update and adopt its' Initial Study Assessment Guidelines to address Vehicle Miles Traveled (VMT) and safety metrics pursuant to CEQA Guidelines Section 15064.3.
- ▶ **Implementation Program C: Vehicle Miles Traveled (VMT) Reduction Program.** To support climate change related goals and CEQA related VMT policies per SB 743 (2013), the County shall develop a Vehicle Miles Traveled Reduction Program.
- ▶ **Implementation Program H: Complete Streets Guidelines.** The County shall prepare and adopt Complete Streets Design Guidelines/standards to be used when constructing new roadways or improving existing roadways where Complete Streets would be

appropriate/feasible. Complete Streets Design Guidelines/standards should be consistent with the pedestrian and bicycle design guidelines and design standards established by Caltrans and supporting state/federal guidelines when designing bicycle/pedestrian facilities. These include the California Manual on Uniform Traffic Control Devices (CAMUTCD), Highway Design Manual, Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO).

The County shall improve pedestrian safety at intersections and mid-block locations in developed communities by providing pedestrian crossing treatments where appropriate.

- ▶ **Implementation Program I: County Road Standards Update.** The County shall update Road Standards to include the Complete Street Design Guidelines/Standards.

Public Facilities, Services and Infrastructure

- ▶ **Policy PFS-1.10: Efficient County Operation and Maintenance.** The County shall operate and maintain County facilities in an efficient manner that meets community needs while conserving financial and natural resources.
- ▶ **Policy PFS-2.1: Sustainable Plans and Operations.** The County shall encourage energy efficiency, greenhouse gas reduction features, and resiliency planning into County facility and service plans and operations.
- ▶ **Policy PFS-2.2: Sustainable Community Facility Design.** The County shall encourage the incorporation of sustainable design features in community facilities to reduce energy demand and environmental impacts, such as reflective roofing, permeable pavement, and incorporation of shade trees.
- ▶ **Policy PFS-2.3: Energy Efficient Facility Construction, Purchases, Leases, Retrofits, and Expansions.** The County shall prioritize energy efficiency and water conservation as key design features when constructing, purchasing, leasing, retrofitting or expanding County facilities.
- ▶ **Policy PFS-2.5: County Employee Trip Reduction.** The County shall encourage its employees to reduce the number and distance of single-occupancy vehicle work trips.
- ▶ **Policy PFS-2.6: County Alternative Fuel Vehicle Purchases.** The County shall review market-available technologies for alternative fuel vehicles and prioritize purchase of vehicles to reduce greenhouse gas emissions where economically feasible.
- ▶ **Policy PFS-2.8: Electric Vehicle Charging Station Infrastructure.** The County shall include electrical vehicle charging station infrastructure in new County-initiated facility construction to the extent feasible. The County shall also look for opportunities to install EV charging stations as part of any major renovation, retrofit or expansion of County facilities.
- ▶ **Policy PFS-4.6: Reclaimed Water.** The County shall encourage public wastewater system operators to upgrade existing wastewater treatment systems to reclaim water suitable for reuse for landscaping, irrigation, and groundwater recharge.
- ▶ **Policy PFS-5.5: Agricultural Waste Reuse.** The County shall support the beneficial reuse of agricultural wastes for activities such as composting and energy generation.
- ▶ **Policy PFS-5.6: Value-Added Alternatives to Waste Disposal.** The County shall promote value-added alternatives to solid waste management, such as compost, energy, biochar, and wood products to avoid open burning of agricultural biomass wastes.

- ▶ **Policy PFS-7.6: Smart Grid Development.** The County shall work with utility providers to implement smart grid technologies as part of new developments and infrastructure projects.

Implementation Programs

- ▶ **Implementation Program A: Infrastructure Improvements and Funding.** The County shall prepare, adopt, and periodically update capital improvement programs for all County-owned and operated facilities and services to maintain adequate levels of service and consistency with the General Plan.

Conservation and Open Space Element

- ▶ **Policy COS-3.2: Tree Canopy.** The County shall encourage the planting of trees and the protection of existing urban forests and native woodlands, savannahs, and tree canopy throughout the county, including along State or County designated scenic roadways and in residential and commercial zones throughout the county but especially those located within designated disadvantaged communities.
- ▶ **Policy COS-3.3: Utility Undergrounding Priority.** The County shall give overhead utility undergrounding within high fire hazard areas and Scenic Resource Areas first priority when allocating County Utility Undergrounding Funds.
- ▶ **Policy COS-7.4: Electrically-Powered Equipment for Oil and Gas Exploration and Production.** The County shall require discretionary development for oil and gas exploration and production to use electrically-powered equipment from 100 percent renewable sources and cogeneration, where feasible, to reduce air pollution and greenhouse gas emissions from internal combustion engines and equipment.
- ▶ **Policy COS-7.7: Conveyance for Oil and Produced Water.** The County shall require new discretionary oil wells to use pipelines to convey oil and produced water; oil and produced water shall not be trucked.
- ▶ **Policy COS-8.1: Reduce Reliance on Fossil Fuels.** The County shall promote the development and use of renewable energy resources (e.g., solar, thermal, wind, tidal, bioenergy, hydroelectricity) to reduce dependency on petroleum-based energy sources.
- ▶ **Policy COS-8.2: Incentives for Energy Efficiency.** The County shall encourage the State and energy utility companies to provide programs, rebates, and incentives for energy efficiency installation and retrofit projects.
- ▶ **Policy COS-8.3: Coordinate Climate Action Plan with Cities and Organizations.** The County shall facilitate the coordination of its Climate Action Plan implementation and maintenance with the cities in the county, the Air Pollution Control District, and other organizations to promote countywide collaboration on addressing climate change.
- ▶ **Policy COS-8.4: Clean Power Alliance.** The County, as a signatory to a legal entity created under a Joint Powers Authority with neighboring communities, shall continue to serve as an active member of the Clean Power Alliance or similar organization providing local customer access to electricity generated from low carbon renewable energy sources in excess of State requirements.
- ▶ **Policy COS-8.5: Decarbonize Communitywide Electricity Supplies.** The County shall work with utility providers to offer residents options to purchase and use renewable energy resources.

- ▶ **Policy COS-8.6: Zero Net Energy and Zero Net Carbon Buildings.** The County shall support the transition to zero net energy and zero net carbon buildings, including electrification of new buildings.
- ▶ **Policy COS-8.7: Sustainable Building Practices.** The County shall promote sustainable building practices that incorporate a “whole systems” approach for design and construction that consumes less energy, water, and other non-renewable resources, such as by facilitating passive ventilation and effective use of daylight.
- ▶ **Policy COS-8.8: Renewable Energy Features in Discretionary Development.** The County shall encourage the integration of features that support the generation, transmission, efficient use, and storage of renewable energy sources in discretionary development.
- ▶ **Policy COS-8.9: Urban Tree Canopy Improvements for Energy Conservation.** The County shall encourage discretionary development to include the planting of shade trees on each property and within parking areas to reduce radiation heat production.
- ▶ **Policy COS-8.10: Battery Energy Storage Systems.** The County shall encourage battery energy storage systems as an option for optimizing the management of electricity generated by renewable resources.
- ▶ **Policy COS-8.11: Improve Energy Conservation Awareness.** The County shall encourage community members to conserve energy and reduce greenhouse gas emissions and increase awareness about energy efficiency and climate change and adaptation, to conduct targeted outreach to homeowners and contractors to encourage installation of electric appliances upon routine replacement of natural gas appliances and heaters and provide information regarding financial incentives.
- ▶ **Policy COS-10.4: Greenhouse Gas Reductions in Existing and New Development.** The County shall reduce GHG emissions in both existing and new development through a combination of measures included in the GHG Strategy, which includes new and modified regulations, financing and incentive-based programs, community outreach and education programs, partnerships with local or regional agencies, and other related actions.

Implementation Programs

- ▶ **Implementation Program C: Update Tree Protection Ordinance.** The County shall update existing Tree Protection Regulations in the Non-Coastal Zoning Ordinance to further enhance conservation of our urban forests and the preservation of the County’s oak woodland resources. Updates shall include incorporation of Board-adopted recommendations from the Ventura County Oak Woodlands Management Plan (2007), which include tree replacement offsets for ministerial development projects that remove protected trees, revisiting mitigation ratios for tree removal and oak woodland impacts for discretionary development projects. The update shall also evaluate existing protections for invasive, non-native trees and consider the degree to which they provide habitat for a species during critical life stages (e.g., colonial roost sites, breeding sites, etc.). In addition, the evaluation shall also include anticipated effects of climate change on the urban forest environment.
- ▶ **Implementation Program H: County Tree Planting Program.** The County shall plant at least one thousand trees annually.

- ▶ **Implementation Program N: Sustainable Building, Siting, and Landscaping Practice Guidelines.** The County shall prepare sustainable building, siting, and landscaping practice guidelines that promote a whole systems approach to building designs and construction techniques that reduce consumption of non-renewable resources such as oil, gas and water and promote renewable energy use.
- ▶ **Implementation Program O: Assessment of Land Near Electrical Transmission and Distribution Lines.** The County shall conduct a study and prepare a publicly available assessment of suitable undeveloped lands near electrical transmission and distribution lines that serve as priority areas for the development of utility-scale solar energy generation and storage projects. If suitable locations are identified, the County shall establish a new zone, called a Renewable Energy Priority Zone, for these sites in the County's Coastal and Non-Coastal Zoning Ordinances.
- ▶ **Implementation Program P: Study to Demonstrate Energy and Greenhouse Gas (GHG) Savings.** The County shall conduct a study that demonstrates the energy and greenhouse gas (GHG) savings of the options identified in Implementation Program COS-L using modeled building prototypes. To satisfy state regulatory requirements for Energy Reach Code adoption, the study shall also demonstrate long-term cost savings of the options through a life-cycle cost analysis that considers the initial costs of efficiency improvements offset by utility bill cost savings and other relevant factors.
- ▶ **Implementation Program Q: Incentives for Development in the Renewable Energy Priority Zone.** To incentivize the development of the Renewable Energy Priority Zone sites, the County shall consider waiving permit fees and providing a reduction on the annual property tax assessment for the portion of land used for renewable energy generation or storage.
- ▶ **Implementation Program R: Performance-Based Building Code for Green Building.** The County shall update the Building Code to establish performance-based standards that incentivize green building techniques.
- ▶ **Implementation Program S: Building Code Update.** The County shall update the Building Code to include a mandatory Energy Reach Code.
- ▶ **Implementation Program T: Energy Consumption Performance.** The County shall continue to review its energy consumption performance and implement programs designed to increase energy efficiency in County-owned buildings, including, but not limited to:
 - reduced operating hours for heating, ventilating and lighting systems,
 - installation of weather stripping on all openable doors and windows,
 - development of energy audit and energy management programs,
 - implementation of operation and maintenance programs which contribute to energy conservation,
 - develop energy audits and energy management programs for all County-owned facilities,
 - develop a plan to re-invest utility company rebates and utility savings into a long-range funding program for on-going conservation projects,
 - implement operational and maintenance programs which contribute to energy conservation,

- investigate and implement new energy technologies such as solar and fuel cells,
 - install energy management systems in all County-owned facilities to control air conditioning and lighting systems where beneficial,
 - install ceiling, wall, and roof insulation whenever feasible,
 - install plumbing flow restrictors in toilets, lavatories and showers, and
 - provide energy conservation training and literature to all County agencies
- ▶ **Implementation Program U: Solar Canopies in Non-Residential Projects.** The County shall amend the County’s Coastal and Non-Coastal Zoning Ordinances to require parking lots for new non-residential construction projects, with floor area of greater than 50,000 square feet, to include solar canopies.
- ▶ **Implementation Program W: Energy Efficiency and Conservation Program.** The County shall develop a behavior change program for energy efficiency and conservation. This program would provide energy literacy training for low-income customers on buying energy-efficient products or using energy more efficiently; develop and offer digital applications offering real-time energy use information to residents and businesses; offer anonymized data on community energy use for residents to compare performance; and provide rewards or rebates for improved energy conservation.

Hazards and Safety Element

- ▶ **Policy HAZ-10.5: Air Pollution Impact Mitigation Measures for Discretionary Development.** The County shall work with applicants for discretionary development projects to incorporate bike facilities, solar water heating, solar space heating, incorporation of electric appliances and equipment, the use of zero and/or near zero emission vehicles and other measures to reduce air pollution impacts and reduce greenhouse gas (GHG) emissions.
- ▶ **Policy HAZ-10.6: Transportation Control Measures Programs.** The County shall continue to work with the Ventura County Air Pollution Control District (APCD) and Ventura County Transportation Commission (VCTC) to develop and implement Transportation Control Measures (TCM) programs consistent with the APCD’s Air Quality Management Program (AQMP) to facilitate public transit and alternative transportation modes within the county.
- ▶ **Policy HAZ-10.7: Fuel Efficient County Vehicles.** When purchasing new County vehicles, the County shall give strong preference to fuel efficient vehicles, including the use of zero emission vehicles when feasible.
- ▶ **Policy HAZ-10.8: Alternative Transportation Modes.** The County shall promote alternative modes of transportation that reduce single-occupancy vehicle (SOV) travel and enhance “last-mile” transportation options to improve air quality.
- ▶ **Policy HAZ-11.6: Accessible Cooling Centers.** The County shall expand partnerships with local governments, non-government organizations, churches, and businesses to provide additional cooling centers, particularly in designated disadvantaged communities.
- ▶ **Policy HAZ-11.7: Green Building Design Features.** The County shall encourage development to include retrofits to improve building performance and market value through strategic building design features, including insulation and strategic orientation of buildings to reduce energy usage, solar-reflective white roofs, solar panels, green roofs (vegetation on roofs), and battery storage for energy.

- ▶ **Policy HAZ-11.8: Undergrounding Utilities.** The County shall work with utility providers to underground overhead power lines (both existing and as part of discretionary development) to increase the resilience of the energy grid and reduce wildfire potential, especially in Existing Communities.
- ▶ **Policy HAZ-11.9: Urban Greening.** The County shall promote the use of urban greening techniques, such as cool pavement technology, parking lot shading, landscaping, and other methods to offset climate change impacts and reduce greenhouse gas emissions for discretionary development and County-initiated projects.
- ▶ **Policy HAZ-11.10: Solar Photovoltaic Carports.** The County shall promote the use of solar photovoltaic carports for discretionary development and County initiated projects.

Agriculture Element

- ▶ **Policy AG-4.3: Technological Innovation.** The County shall encourage the use of technology that supports agricultural production, while enhancing environmental sustainability and natural resource conservation.
- ▶ **Policy AG-5.2: Electric- or Renewable-Powered Agricultural Equipment.** The County shall encourage and support the transition to electric- or renewable-powered or lower emission agricultural equipment in place of fossil fuel-powered equipment, when feasible.
- ▶ **Policy AG-5.3: Electric- or Renewable- Powered Irrigation Pumps.** The County shall encourage farmers to convert fossil fuel-powered irrigation pumps to systems powered by electric or renewable energy sources, such as solar-power, and encourage electric utilities to eliminate or reduce stand-by charges.
- ▶ **Policy AG-5.4: Alternative Irrigation Techniques.** The County shall encourage farmers to continue and enhance the water-saving irrigation techniques designed to reduce water consumption.

Water Resources Element

- ▶ **Policy WR-3.1: Non-Potable Water Use.** The County shall encourage the use of non-potable water, such as tertiary treated wastewater and household graywater, for industrial, agricultural, environmental, and landscaping needs consistent with appropriate regulations.
- ▶ **Policy WR-3.2: Water Use Efficiency for Discretionary Development.** The County shall require the use of water conservation techniques for discretionary development, as appropriate. Such techniques include low-flow plumbing fixtures in new construction that meet or exceed the state Plumbing Code, use of graywater or reclaimed water for landscaping, retention of stormwater runoff for direct use and/or groundwater recharge, and landscape water efficiency standards that meet or exceed the standards in the California Model Water Efficiency Landscape Ordinance.
- ▶ **Policy WR-3.3: Low-Impact Development.** The County shall require discretionary development to incorporate low impact development design features and best management practices, including integration of stormwater capture facilities, consistent with County's Stormwater Permit.
- ▶ **Policy WR-3.4: Reduce Potable Water Use.** The County shall strive for efficient use of potable water in County buildings and facilities through conservation measures, and technological advancements.

- ▶ **Policy WR-6.1: Water for Agricultural Uses.** The County should support the appropriate agencies in their efforts to effectively manage and enhance water quantity and quality to ensure long-term, adequate availability of high quality and economically viable water for agricultural uses, consistent with water use efficiency programs.
- ▶ **Policy WR-6.2: Agricultural Water Efficiency.** The County should support programs designed to increase agricultural water use efficiency and secure long-term water supplies for agriculture.
- ▶ **Policy WR-6.3: Reclaimed Water Use.** The County should encourage the use of reclaimed irrigation water and treated urban wastewater for agricultural irrigation in accordance with federal and state requirements in order to conserve untreated groundwater and potable water supplies.

Economic Vitality Element

- ▶ **Policy EV-4.4: Renewable Energy Facilities.** The County shall identify appropriate locations to allow for development of renewable energy generation and storage facilities and encourage the development of innovative approaches to renewable energy deployment, including solar power, wind power, wave energy, distributed power systems and micro-grids, and other appropriate renewable sources and storage and distribution systems.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 4.6-1: Result in the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources or Conflict with or Impede State or Local Plans for Renewable Energy or Energy Efficiency

Appendix F of the State CEQA Guidelines requires the consideration of the energy implications of a project. CEQA requires mitigation measures to reduce “wasteful, inefficient, and unnecessary” energy usage (PRC Section 21100, subdivision [b][3]). Neither the law nor the State CEQA Guidelines establish criteria that define wasteful, inefficient, or unnecessary use of energy. However, the 2040 General Plan is evaluated for energy performance relative to baseline conditions, so this section evaluates the energy conservation and renewable energy features that have been incorporated into the 2040 General Plan for construction and operation in future development.

The land use diagram of the 2040 General Plan would accommodate future development of relatively higher intensity residential, commercial, mixed use, and industrial land uses within the Existing Community area designation (boundary) and the Urban area designation (boundary). These are areas with existing residential, commercial, and/or industrial uses developed with urban building intensities generally located adjacent to the boundaries of incorporated cities or along highway corridors such as SR 33, SR 118, SR 126, and Highway 101. The residential, commercial, mixed use, and industrial land use designations of the 2040 General Plan would apply to approximately 1.2 percent of land in the unincorporated county. Potential uses within these designations include small- and large-lot detached single-family homes, one- to three-story attached single-family dwellings and lower density multifamily developments, mixes of commercial, office, residential, civic, and/or recreational uses, one- to two-story structures for retail and commercial services, and industrial employment-generating uses, such as production, assembly, warehousing, and distribution.

The Rural land use designation would allow for low-density and low-intensity land uses such as residential estates and other rural uses which are maintained in conjunction with agricultural and horticultural uses or in conjunction with the keeping of farm animals for recreational purposes, such as greenhouses, principal and accessory structures related to agriculture, and also oil and gas wells, and would apply to approximately 0.9 percent of land in the unincorporated county.

Approximately 97.1 percent of the unincorporated county would remain designated as either Open Space (approximately 88 percent) or Agriculture (approximately 9 percent) under the 2040 General Plan. The Open Space land use designation would allow low intensity development with a minimum parcel size of 10 acres and 1 dwelling unit per parcel. Other uses could include composting operations, greenhouses, correctional institutions, fire stations, and oil and gas wells. The Agriculture land use designation would allow for development of one dwelling unit per parcel and a minimum parcel size of 40 acres. Other uses could include greenhouses, principal and accessory structures related to agriculture, and composting operations. Proposed policies of the 2040 General Plan addressing flaring and trucking associated with new discretionary oil and gas wells could result in the construction and operation of new pipelines for the conveyance of oil, gas, or produced water.

Energy Consumption in Construction

Future development accommodated by the 2040 General Plan would involve construction activities, including the construction of new buildings and related infrastructure. Energy would be required to operate and maintain construction equipment and to produce and transport construction materials associated with the construction of the development of the 2040 General Plan. The one-time energy expenditure required to construct buildings and other infrastructure associated with future development would be nonrecoverable. Most construction-related energy consumption would result from the operation of construction equipment and vehicle trips associated with commutes by construction workers and haul trucks supplying and removing materials. Policy COS-8.7 and Implementation Program COS-U also state that the County should encourage sustainable building practices based on a whole systems approach, which entails a consideration of green building features not just within the building's design, but also within the processes used to bring that building fruition (e.g., energy use from the equipment and products used during construction). Conditions of approval for a project based on this principle could require builders to include measures that promote carpooling for workers, use of alternative fuels, and the use of high-efficiency internal combustion engines or electric-powered equipment. Also because project applicants must pay for fuel during construction, there is an inherent incentive for project applicants to ensure that their equipment operates efficiently and to limit non-productive use to minimize construction energy costs. For these reasons, construction activities associated with future development under the 2040 General Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy.

Energy Consumption in Future Development

This subsection describes the energy use associated with implementation of the 2040 General Plan. The future operation of residential, commercial, educational, industrial and other buildings, structures, and activities in the plan area under the 2040 General Plan would include the use of electricity and natural gas for many different applications, such as lighting, space and water heating, appliances, and equipment use. Indirect energy use would include the pumping, treatment, and conveyance of water for buildings, landscaping, and many other end uses. Future development under the 2040 General Plan would increase total electricity and natural gas consumption in the county relative to existing conditions though the development

and occupancy of new commercial and residential buildings, as well as other land uses, structures, and activities that consume natural gas and electricity. Table 4.6-2 shows annual energy consumption from buildings countywide under baseline conditions (2015), and at the 2040 buildout.

Table 4.6-2 2040 General Plan Estimated Building Electricity and Natural Gas Use

	Electricity (kWh/year)		Natural Gas (kBTU/year)	
	2015	2040	2015	2040
Total Energy Consumption	588,724,066	628,775,129	26,212,405	27,875,378
Per Capita Consumption	6,023	6,174	268	274

A 6.8 percent increase in electricity and 6.3 percent increase in natural gas consumption are forecast under the 2040 General Plan. This estimate is based on forecasted employment and housing growth that would be accommodated by the 2040 General Plan and does not reflect quantified reductions from energy saving measures contained in the 2040 General Plan. These energy conservation features cannot be accurately quantified at this time because the policies and implementation programs allow flexibility for design and implementation. Policies and Programs addressing energy in future development are targeted toward minimizing the consumption of electricity and natural gas in new construction, by promoting energy efficiency design techniques that minimize water heating, air conditioning, and lighting energy needs. Examples of policies intended to promote energy efficiency include Policy LU-16.9 Building Orientation and Landscaping, Policy PFS-2.3 Energy Efficient Facility Construction, and Policy COS-8.7 Sustainable Building Practices. These policies work to reduce energy consumption while other policies included in the plan are intended to supply the remaining energy needs with renewable sources of energy through solar panels. Policy COS-8.8 Renewable Energy Features in Discretionary Development and Policy HAZ-11.10 Solar Photovoltaic Carports will result in the deployment of additional distributed energy generation. Policy COS-8.10 Battery Energy Storage Systems and Policy PFS-7.6 Smart Grid Development will be implemented as well to ensure that the electricity produced from renewable energy sources is optimized for the time of building energy use, so as not to burden the region's electric grid with excess generation and peak demands.

Opportunities for promoting development of all-electric buildings (specifying the use of appliances that do not require natural gas) have also been included as a measure through Policy 8.5, Decarbonize Energy Supplies, and Policy 8.6, Zero Carbon Buildings. All-electric buildings would not require new piping for natural gas. The 2040 General Plan also encourages the County to continue working with the Clean Power Alliance, SCE, SoCalGas, and other partners to supply electricity and gas produced from renewable sources. Policy COS-8.4 encourages the County to maintain its participation in the Clean Power Alliance, which currently provides 100 percent carbon-free electricity to 83 percent of eligible utility customers in the unincorporated county, as shown in Table 4.6-1. Increasing participation in this program and expanding local generation through Policies COS-8.1, COS-8.8, EV-4.4, COS-Q, COS-U support the goals of VCREA to advance the use of clean and renewable local resources, as described in the regulatory settings. The supply of natural gas in new buildings can also be transitioned to renewable sources through Policy PFS-5.6 and Policy COS-8.1, which allow organic wastes to be generated from agricultural production, and vegetation treatment to be converted into biomethane, which can serve as an alternative to fossil fuels.

Policies and programs included in the 2040 General Plan would also reduce gas and diesel fuels consumed in the transportation sector by working to reduce VMT and providing EV

charging infrastructure to support increased levels of EV use. VMT reduction would be achieved by providing transit alternatives, through innovative shared transportation model described in policies CTM-6.6, CTM-6.7, and CTM-6.9, publicly available scooters and bicycles described as “micro-mobility” operations in Policy CTM 6.8, and expansion of bicycle and pedestrian networks as described policies CTM-3.1, 3.3, 3.4, 3.5, 3.7 and 3.8. These policies support the county’s overall program for VMT reduction sought by Implementation Program CTM-C. Additionally, future development would be subject to VMT thresholds consistent with SB 743, which would be included in the ISAG under Implementation Program CTM-B. These thresholds would have the effect of requiring projects to include design features or other measures that result in VMT reduction. The installation of electric vehicle charging equipment as promoted in Policies CTM-6.5 and PFS-2.8 would support a transition to the broader adoption of zero emission vehicles, which would reduce use of gasoline- and diesel-powered vehicles.

Under the 2040 General Plan the county’s electricity and natural gas use would increase; however, the electricity consumed would come from utilities producing power from a high proportion of zero carbon electricity sources; energy efficiency measures would be integrated into new construction and existing buildings; the county would implement measures to substitute natural gas with biomethane produced from organic waste; electric vehicle chargers will be installed in public facilities to further transition vehicle ownership to Zero Emissions Vehicles; and a robust set of VMT reduction measures will be put into place to encourage alternative modes of transportation that reduce overall motor vehicle use and associated gas and diesel consumption. Operational activities associated with future development under the 2040 General Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy.

Additionally, implementation of the 2040 General Plan would not conflict with or obstruct State plans for renewable energy or energy efficiency, which are described in the 2018 IEPR. The State’s planning for renewable energy is expressed through laws and regulations that mandate the deployment of renewable and clean energy generation at the building and utility scales. The policies and programs of the 2040 General Plan would allow the County to not only meet the mandates by 2040 but exceed them by expanding the scope and accelerating the timeframe of renewable energy deployment in the county. For example, the 2019 Building Energy Efficiency Standards which go into effect in January 2020 will require on-site solar generation for all new residential construction. Policy HAZ-11.7 expands the scope of solar installations to include existing residential and commercial buildings and Implementation Program COS-U will require the installation of solar on the parking lot of large commercial buildings. Policy COS-8.10 aims to pair renewable energy generation with energy storage systems, to increase the benefits associated with renewable generation by storing renewable energy for later use. According to the 2018 IEPR, “energy storage is an important tool to help integrate increasing amounts of solar- and wind-powered electricity into the grid. For example, it can be used to store renewable generation when production exceeds demand and then reinject the energy into the system when supply is short. Energy storage can also be used in place of natural gas peaking plants in high electricity demand hour and can provide several services to the electric grid, including frequency regulation, voltage support, resource adequacy, time-of-use bill management, and demand charge reduction. Energy storage is helping alleviate energy reliability issues in Southern California” (CEC 2018:111).

Under the State's RPS electric utilities are required to produce 33 percent of electricity from renewable energy sources by the end of 2020 and increasing to 60 percent by the end of 2030. Under the County's participation in CPA it is currently exceeding this requirement, with 83 percent of residential customers receiving electricity from 100 percent renewable energy sources. Under the 2040 General Plan the County's capacity to produce renewable energy will continue to expand. Policy COS-8.1 promotes the development and use of renewable energy resources (e.g., solar, thermal, wind, tidal, bioenergy, hydroelectricity) as alternatives to petroleum-based energy sources. EV-4.4 directs the County to identify appropriate locations to allow for development of renewable energy generation and storage facilities and encourage the development of innovative approaches to renewable energy deployment, including solar power, wind power, wave energy, distributed power systems and microgrids, and other appropriate renewable sources and storage and distribution systems. Under Implementation Program COS-M, the County will identify Renewable Energy Priority Zones comprised of suitable undeveloped lands near electrical transmission and distribution lines that serve as priority areas for the development of utility-scale solar energy generation and storage projects.

Chapters 2 and 3 of the 2018 IEPR provide recommendations to State agencies on energy efficiency and renewable energy generation, respectively, which include a continuation of doubling energy savings through utility programs as mandated under SB 350 and continuing the expansion of electricity generation from renewable and zero carbon sources as mandated under SB 100. Regarding local plans for renewable energy or energy efficiency, the 2040 General Plan would not conflict with local goals set by VCREA, because the plan would increase energy efficiency and advance the use of clean, efficient and renewable local resources through the deployment of additional renewable energy generation and storage systems under Policies COS-8.1 and HAZ-11.7, and Programs COS-M and COS-U. The 2040 General Plan would also introduce energy efficiency strategies for existing buildings, and introduce performance standards for energy efficiency in new construction in excess of the mandatory requirements of the California Building Energy Efficiency Standards. The 2040 General Plan would not conflict with or obstruct State and local plans for energy efficiency or renewable energy; rather it would support the goals of these plans.

The preceding analysis describes several 2040 General Plan policies and programs that would support energy conservation and efficiency during construction and operation activities under implementation of the 2040 General Plan. Per-capita energy consumption would be decreased by the State's requirements for more energy efficient buildings and policies and programs that encourage buildings with energy performance that is more efficient than State standards. The 2040 General Plan encourages future sustainable building practices that would promote efficient energy consumption associated with construction activities. Reliance on fossil fuels would be decreased by supporting the electrification of vehicles by deploying charging infrastructure, promoting building electrification, and encouraging alternative modes of transportation. The deployment of additional renewable energy generation sources at the distributed and utility-scales would increase reliance on renewable sources of electricity. As a result, the 2040 General Plan would not result in the wasteful, inefficient, or unnecessary consumption of energy and would not conflict with or obstruct State and local plans for energy efficiency or renewable energy; it would support the goals set forth in these plans. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact