

CHAPTER 4 ALTERNATIVES

This chapter of the Draft SEIR identifies and evaluates alternatives to the project. Alternatives are developed to avoid or substantially lessen significant or potentially significant adverse environmental effects identified because of the implementation of the project, while still attaining most of the basic project objectives.

4.1 Rationale for Alternatives Selection

In accordance with Section 15126.6(a) of the CEQA Guidelines, an EIR must describe a range of reasonable alternatives to the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Section 15126.6(a) also provides that an EIR need not consider every conceivable alternative to a project. Instead, the EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation, but is not required to consider alternatives that are infeasible. There is no ironclad rule governing the nature or scope of the alternatives to be discussed in an EIR, other than the “rule of reason.” CEQA Guidelines Section 15126.6(f) states that “the range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” “The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.”

The following discussion covers a reasonable range of feasible alternatives that focuses on avoiding or substantially lessening the significant effects of the project, even if these alternatives would not attain all the project objectives or would be costlier. According to the CEQA Guidelines, there are many factors that may be considered when addressing the feasibility of alternatives, such as environmental impacts, site suitability as it pertains to various land use designations, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional boundaries. An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, or one that would not achieve most of the basic project objectives. However, CEQA requires that a No Project Alternative be included in the range of alternatives and the Environmentally Superior Alternative be identified.

The purpose of project alternatives is to foster meaningful public participation and informed decision-making. According to the CEQA Guidelines Section 15126.6(d), discussion of each alternative should be sufficient “to allow meaningful evaluation, analysis, and comparison with the proposed project,” but need not be as detailed as that conducted for the project. Therefore, the significant effects of each alternative are discussed in less detail than those of the project, but in enough detail to provide decision-makers perspective and a reasoned choice among alternatives to the project.

The selection of alternatives considers the Project Objectives provided in Chapter 1, Project Description.

The fundamental purpose of the project is to reduce unincorporated County GHG emissions consistent with state legislative requirements through implementation of a CAP, which includes strategies and measures to reduce community and County local government operations (County operations) GHG emissions. Community emissions refer to those GHG emissions generated by activities within the unincorporated County. County operations GHG emissions refer to those GHG emissions generated by County facilities and operational activities throughout the County, including facilities and operations located within incorporated cities, as described in the CAP. The GPA would implement the necessary changes to the County's General Plan to incorporate the CAP and the state GHG legislative requirements. The Guidelines and the GHG Threshold contained therein provide guidance on determining a project's significance as it relates to GHG emissions and determining whether a project would be consistent with the County's CAP.

The CAP, GPA, GHG Threshold, and Guidelines (project) intend to achieve the following objectives:

- Reduce community and County operations GHG emissions to meet the County's GHG reduction targets for 2020 and 2030, and provide a mechanism to meet the County's projected 2050 goal;
- Identify GHG reduction strategies and measures that reduce GHG emissions from activities in the unincorporated areas and address the challenges of a changing climate and improve resilience over the long term;
- Update the County's General Plan and General Plan Update PEIR to incorporate and reflect the GHG reduction targets, strategies, and measures of the CAP for the reduction of GHG emissions because of buildout of the General Plan;
- Provide Guidelines for determining significance that include a GHG threshold of significance related to GHG emissions and provide guidance to the community on how to achieve consistency with the CAP and utilize CEQA streamlining tools for analysis of GHG emission pursuant to the requirements of CEQA Guidelines Section 15183.5 (b)(2) or as subsequently amended;
- Prepare a County GHG emissions inventory, which includes community and County operations emissions, and analyze the potential growth of these emissions over time; and,
- Establish a comprehensive approach to reduce County GHG emissions by incorporating feasible and effective GHG emission reduction measures.

Three components of the project—GPA, GHG Threshold, and Guidelines—are policy actions and would not directly or indirectly result in physical environmental changes. These actions require preparation of a CAP and the evaluation of consistency with the CAP. The driver for potential environmental impacts would come from the implementation measures and supporting efforts outlined in the CAP. This Draft SEIR programmatically evaluates the environmental impacts of implementation of GHG reduction measures and

supporting efforts outlined in the CAP. As described in Chapter 3.0, Effects Found Not to be Significant, impacts to the following issues were determined to be less than significant: Geology and Soils, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems.

The Draft SEIR determined that implementation of the CAP would result in the following significant impacts:

- Aesthetics and Visual Resources: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to scenic vistas, scenic resources, visual character, and light and glare because of direct investment projects, traffic calming improvements; bicycle, pedestrian, and alternative transportation improvements, ground or roof-mounted renewable energy systems including small wind turbines; and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems.
- Agricultural Resources: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to direct or indirect conversion of agricultural resources, conflicts with Williamson Act contracts and agricultural zoning, and forest land conversion because of implementation of direct investment projects, and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems.
- Air Quality: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to exceedance of federal and state ambient air quality standards, criteria pollutants, odors, and impacts to sensitive receptors because of traffic calming, bicycle, pedestrian, park-and-ride, solid waste expansion, agricultural projects, direct investment projects, and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems. The CAP would result in new significant impacts related to odors because of the potential for new or expanded organics processing facilities.
- Biological Resources: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to special-status species, riparian resources, and wildlife movement corridors because of GHG reduction measures and supporting efforts that would include construction of traffic calming, bicycle, pedestrian, park-and-ride, water infrastructure improvements, solid waste expansion, agricultural projects, direct investment projects, and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems.
- Cultural Resources: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to historical resources because of energy efficiency improvements and the construction of small-scale solar photovoltaic and small wind turbines, and

upgrading mechanical systems. The CAP would result in significant project and cumulative impacts related to archaeological, paleontological resources, and inadvertent discovery of human remains because of construction of traffic calming, bicycle, pedestrian, park-and-ride, solid waste expansion, agricultural projects, direct investment projects, and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems.

- Greenhouse Gases: While the individual measures and strategies within the CAP would lead to overall GHG reductions sufficient to meet the 2020 and 2030 targets, because future implementation actions (both state and local) are needed to achieve the emission reductions goal for 2050. Thus, achievement of the 2050 goal cannot be certain. Therefore, a significant and unavoidable GHG impact related to attainment of 2050 GHG reduction goal would occur.
- Hazards and Hazardous Materials: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to wildfire from small- and large-scale renewable energy systems because of the introduction of mechanical and electric components, as well as construction activities in areas of the County that are susceptible to wildfire.
- Hydrology and Water Quality: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to groundwater supplies and recharge from large-scale geothermal systems (i.e., open-loop), large-scale renewable projects, and direct investment projects because these projects could result in substantial groundwater demands in groundwater basins that are in stressed or overdraft conditions.
- Land Use: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to the division of an established community because of GHG Reduction Measure E-2.1, which would result in new utility-scale solar and wind renewable energy systems which could result in road improvements that could physically divide an established community.
- Noise: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to excessive noise and permanent and temporary increases in ambient noise levels because of GHG Reduction Measure E-2.1, which would result in new utility-scale wind renewable energy systems which could produce significant noise during operation. No other GHG reduction measures would result in significant impacts.
- Transportation and Traffic: The CAP would result in increased significant direct and cumulative impacts beyond what was analyzed in the 2011 GPU PEIR related to conflicts with a plan, policy, or ordinance establishing measures of effectiveness for a circulation system, conflicts with a congestion management program, and increases in hazardous design features because of implementation of new traffic calming measures, new or expanded park-and-ride facilities, new or expanded

pedestrian and bicycle improvements, new large-scale renewable energy systems including solar photovoltaic, solar concentrator, wind turbines, or geothermal, and new or expanded solid waste facilities.

- **Tribal Cultural Resources:** The CAP would result in significant project and cumulative impacts to unknown tribal cultural resources (TCRs) because of construction of traffic calming, bicycle, pedestrian, park-and-ride, solid waste expansion, agricultural projects, direct investment projects, and large-scale photovoltaic solar, concentrated solar, wind turbines, and geothermal energy systems.

The alternatives evaluated in this chapter include the following:

- **No Project Alternative:** The No Project Alternative assumes the CAP, GPA, GHG Thresholds, and Guidelines would not be adopted and implemented. As a result, the County would not adopt strategies, measures, and supporting efforts to reduce GHG emissions in accordance with state-mandated reduction targets.
- **Enhanced Direct Investment Program Alternative:** This alternative would implement the CAP without the renewable energy program (GHG Reduction Measure E-2.1). In lieu of the renewable energy program, the County would pursue the Direct Investment Program (GHG Reduction Measure T-4.1) to a greater degree than currently proposed in the CAP.
- **100% Renewable Energy Alternative:** This alternative would evaluate the increase in renewable energy production from 90% proposed in the CAP to 100%.
- **Increased Solid Waste Diversion Alternative:** This alternative would increase the solid waste diversion rate from 75% to 80% by 2030.

Each of the alternatives addressed in this chapter were examined to determine the extent to which they would avoid or minimize the significant impacts associated with the project.

4.2 Alternatives Considered but Rejected

Consistent with CEQA Guidelines Section 15126.6(c), a brief discussion of those alternatives considered but rejected as infeasible follows.

4.2.1 Alternative Locations

The County's CAP is a programmatic approach to reduce GHG emissions within the unincorporated County in accordance with state GHG emissions reduction targets. The CAP accomplishes this by adopting strategies, measures, and supporting efforts that reduce GHG emissions. These strategies, measures, and supporting efforts would apply to all areas of the unincorporated County and would not be limited to one area or property. Therefore, an alternative site where the project could be implemented would not be

feasible or appropriate because the County only has jurisdiction over lands within its legal boundaries. As such, consideration of an alternative location has been eliminated from further analysis in this Draft SEIR.

4.2.2 Reduced Solid Waste Alternative

This alternative would eliminate GHG Reduction Measures SW-1.1 that establish county-wide diversion targets and increase the facilities that would provide organics processing services. As described in the CAP, this measure would account for reductions of a total of 57,103 MTCO_{2e} by 2030 and 62,159 MTCO_{2e} by 2050. These reductions would be achieved through 75% solid waste diversion by 2025 for the unincorporated county through implementation of the Strategic Plan to Reduce Waste. As described in the Draft SEIR, this GHG reduction measure would expand solid waste diversion and organics processing services and the necessary facilities to meet these demands could result in significant odor and other construction-related impacts (e.g., air quality and noise). The County Board of Supervisors has recently adopted the County's Strategic Plan to Reduce Waste. Within that plan, the County has set targets for increases in waste diversion and organics processing county-wide that are at the levels contemplated in the CAP. An alternative that considers elimination of increased solid waste diversion and organics processing, would be in direct conflict with the adopted Strategic Plan to Reduce Waste because it would reduce the percentage of waste diversion already approved by the Board of Supervisors (i.e., 75%). For this reason, this alternative has been eliminated from further consideration.

4.2.3 80% Below 1990 Levels by 2030 (Climate Stabilization Alternative)

Comments were received during the NOP scoping process that the County should consider an alternative that results in the reduction of GHG emissions to levels that would lead to global climate stabilization. The Intergovernmental Panel on Climate Change (IPCC) defines climate stabilization as limiting global average temperature increase to 2 degrees Celsius above pre-industrial levels. The target reduction of 80% below 1990 levels by 2050 under Executive Order S-3-05 is intended to achieve this stabilization goal. To reach climate stabilization levels, more significant reductions in GHG emissions must occur statewide and globally.

This alternative considers reducing GHG emissions county-wide to achieve the climate stabilization goal, which is 80% below 1990 GHG emissions levels by 2030 instead of 2050 which is equivalent to a reduction of 2,472,859 MT CO_{2e} below 2014 levels. To achieve this goal, more advanced GHG reduction measures focusing on larger emission sectors, such as transportation and the existing environment would need to be implemented, with a smaller proportion of reductions coming from new development. These measures would include, but not be limited to: net zero energy requirements for both existing and new buildings; combination of distributed and consolidated renewable generation systems; major improvements in and expansion of transit infrastructure to increase ridership countywide to offset single-occupancy vehicles; large scale decarbonization of transportation fleet; phase-out of fossil fuels in vehicles, equipment,

and buildings; increased use of alternative fuels, such as biogas ; significant reductions in imported water use through increased desalination and other local water sources; replacement of existing anaerobic septic systems with aerobic systems; achievement of zero waste; and adoption of an urban growth boundary that restricts development to the western portion of the county.

While some of the above reduction measures may be possible from a technological standpoint (such as achievement of zero net energy in existing buildings), there are currently no legal mechanisms that require many of these improvements, especially improvements to existing homes and businesses which may account for a majority of emissions in the future as new construction becomes increasingly more efficient. Certain measures, such as adopting an urban growth boundary and constructing new transit infrastructure in remote areas of the County, may have economic and technological constraints, would not be consistent with the rural character of the County, and may not be able to be implemented at the scale that would be required to implement these programs throughout the unincorporated areas. Further, to achieve GHG emissions reductions that would meet climate stabilization targets, a significant combination or all of the above measures would need to be implemented, the economic feasibility of which is not known because the cost of those measures is not currently known. Achievement of an accelerated climate stabilization goal would require substantial behavioral changes and paradigm shift in policy and technology. Implementation of most of these measures, such as decarbonization of the transportation fleet, would be outside the County's direct jurisdiction. Finally, a climate stabilization target as a mandatory requirement for implementation goes beyond currently adopted state targets and federal legislative requirements.

While implementation of additional GHG reduction measures would result in an overall reduction in GHG emissions in the unincorporated County, no significant unmitigated GHG emissions impacts related to the legislatively required 2020 and 2030 reduction targets were identified for the project. If all of the measures listed could somehow result in achieving emission reduction goals linked to climate stabilization, it would result in reduced GHG emissions and could potentially close the gap of emission reductions required to meet the state 2050 goal and eliminate the project's significant and unavoidable GHG impacts. However, many of the actions that would realistically lead to meeting the 80% goal (such as transit enhancements) are outside of the jurisdiction and land use authority of the County.

Further, many of the additional reduction measures that would be required for this alternative would result in substantial infrastructure investment and construction, the impacts of which would increase the overall levels of construction-related impacts county-wide. While this alternative would meet some of the project objectives to identify reduction targets that meet current legislative requirements and would establish a plan to reduce community and County operations GHG emissions, this alternative would not meet the fundamental purpose of a CEQA alternative, which is to reduce or avoid the significant environmental impacts of the project. For these reasons, this alternative was rejected from further consideration.

4.2.4 Carbon Neutral Alternative

Comments were received during the NOP scoping process that the County should consider an alternative that results in the reduction of GHG emissions to levels that would result in carbon neutrality in the County as a whole. This alternative considers reducing GHG emissions county-wide to achieve zero emissions in the County by 2050. Achieving carbon neutrality county-wide would require implementation of measures well above and beyond state legislation and regulations, and well beyond the jurisdiction and land use authority of the County. The California Air Resources Board (CARB) has prepared a draft plan for achieving emissions 40% below 1990 levels by 2030 and has not considered adoption of a carbon neutrality goal by that target year. To reach carbon neutrality, more significant reductions in GHG emissions must occur statewide and globally. The County would not have the authority to require emission reductions at this scale, as further discussed below.

This alternative would require additional GHG emissions reductions in all CAP categories through measures listed above in Section 4.2.3, 80% below 1990 Levels by 2050 (Climate Stabilization Alternative), as well as implementation of the additional advanced GHG reduction measures including: reforming the systems that deliver utility-scale power, implementing aggressive mode-shifts from automobile to non-automobile trips, mandating 100% waste diversion by 2030, mandating renewable energy positive standards for new construction (i.e., buildings that export energy to the grid), limiting consumption of goods produced outside of the region, and retiring fossil-fuel based utility plants.

As described above for the Climate Stabilization Alternative, many of the additional GHG reduction measures for all CAP categories may be technologically and economically infeasible, and most would result in greater and more significant environmental impacts than the project because of the substantial physical changes that would be required (e.g., construction). In addition, the measures that would be required to reach carbon neutrality, would require not only significant actions by the County and state, but significant shifts in the daily behavior and activities of residents. The success of these types of measures are unknown and may not be achievable. While achievement of carbon neutrality would result in reduced GHG emissions and could close the gap of emission reductions required to meet the 2050 goal and eliminate the project's significant and unavoidable GHG impact, many of the actions required would not be subject to the control of the County. Further, many of the additional reduction measures would result in substantial infrastructure investment and construction, the impacts of which would increase the overall levels of construction-related impacts county-wide. While this alternative would meet some of the project objectives to identify reduction targets that meet current legislative requirements and would establish a plan to reduce county-wide GHG emissions, as described above this alternative relies upon measures that may be technologically and economically infeasible, would result in less GHG reductions than the project, and would not meet the fundamental purpose of a CEQA alternative, which is to reduce or avoid the significant environmental impacts of the project. For these reasons, this alternative was rejected from further consideration.

4.2.5 Distributed Generation Alternative

Comments were received during the NOP scoping process that the County should consider an alternative or should only adopt GHG reduction measures that would limit renewable energy generation to distributed generation systems (i.e., a variety of small, grid-connected systems) and that large, utility-scale energy systems should not be considered. As described in this Draft SEIR, many of the project's significant impacts are associated with the large, utility-scale components that would be induced through implementation of a renewable energy program outlined in GHG Reduction Measure E-2.1. A renewable energy program induces demand for renewable energy by giving ratepayers an option of having their energy generated by renewable energy sources at competitive market rates. By establishing such a program, additional demand for larger-scale renewable energy systems is created.

The County currently allows construction of large-scale renewable energy systems (e.g., solar, wind, geothermal) subject to its ordinances, policies, and standards. This would not change under this alternative. However, this alternative would remove the renewable energy program component of GHG Reduction Measure E-2.1 and would instead promote the construction of distributed generation systems. By eliminating the renewable energy program component, this alternative would eliminate the induced demand for potentially larger and a greater number of large-scale renewable energy systems. Large-scale renewable energy systems could still be developed and their associated impacts could occur. However, this alternative would eliminate the induced demand for these systems, thereby reducing the total numbers of systems that would occur within the County. Therefore, overall impacts (e.g., construction, biological resources, air quality) would be reduced compared to the project. Distributed generation systems are currently allowed within the County and would be further enhanced through GHG Reduction Measure E-2.1.

If large, utility-scale components were eliminated from this measure, then additional distributed generation sites and infrastructure (e.g., rooftops, individual lots) would be required to make up the gap and still achieve 90% renewable energy by 2030 – enough to offset 230,365 MTCO_{2e}. This is equivalent to installing 971 GW of solar projects in addition to the solar installations that would occur under GHG Reduction Measure E-2.2 and E-2.3 (see Attachment 1 of Appendix C). If limited to residential installations, this would require the participation of over 245,000 homes, which is greater than the County's anticipated 192,925 households by 2030. Even if 100 percent of all homes have installed solar by 2030, making up the gap would entail additional installation of 265 MW of solar projects, requiring 16.7 million square feet of roof space. A 2009 solar feasibility study for San Diego County estimated that the entire County has 235 million square feet of commercial and industrial roof space (Anders and Bailek 2009). With unincorporated County jobs accounting for approximately 10% of Countywide jobs, this leads to an estimated 2.3 million square feet of available non-residential roof space in the unincorporated County – less than what would be required to install 265 MW of solar. Thus, it would be unlikely that there would be sufficient sites and infrastructure that could support distributed generation facilities to provide the amount of GHG reductions to make

up for those allocated from large, utility-scale renewable energy facilities in Measure E-2.1.

It is also not known whether the Distributed Generation Alternative would meet most of the project objectives, specifically to reduce community and County operations GHG emissions to meet the 2020 and 2030 targets, due to its highly speculative nature. The amount of rooftop space for solar and additional land required to implement it may not be within the control of the County. For example, CAP Measure E-2.2 requires amendment of County code and zoning ordinance to require installation of solar energy systems on new non-residential development. The reductions from this measure are quantified separately from the reductions taken by Measure E-2.1 (90% renewable energy by 2030). Measure E-2.3 requires installation of photovoltaic (PV) electrical systems in existing residential development to offset 32% of electricity use in existing homes by 2020 and 80% by 2030. The reductions from this measure are also quantified separately from the reductions taken by Measure E-2.1. Elimination of the large-scale renewable systems from Measure E-2.1 would require Measures E-2.2 and E-2.3 to require a larger percentage of PV electrical systems on new non-residential and on existing residential, which may not be achievable within the County's jurisdiction, as noted previously. In addition, under Measure E-2.4, a Distributed Generation Alternative could also require renewable energy generation from County facilities, the feasibility of which is not known and would require an amendment to the County's 2015 – 2020 Strategic Energy Plan.

To achieve 90% renewable energy for the unincorporated County by 2030 both distributed generation and small- and large-scale renewable energy systems would be required. Furthermore, to meet the targets established in the CAP, increased reductions would need to be achieved through increases or enhancements of other reduction measures the implementation of which could result in environmental impacts. The Enhanced Direct Investment Program Alternative analysis below provides the comparative impacts of the elimination of a renewable energy program. For the reasons described above, this alternative has been eliminated from further evaluation.

4.2.6 Other Variations/Combinations of GHG Reduction Measures Alternative

The CAP includes 29 GHG reduction measures all of which combine to total 897,145 MTCO_{2e} in GHG reductions by 2030. The two sectors of GHG reductions where most significant impacts would result are the Energy Sector (measures associated with small- and large-scale renewable energy facilities) and the Solid Waste Sector (measures associated with new or expanded solid waste facilities). Alternatives that consider either reductions or enhancements of GHG reductions from these sectors are considered within the Modified Solid Waste Alternative (and rejected for the reasons stated above), Enhanced Direct Investment Program Alternative, and the 100% Renewable Energy Alternative, which are evaluated in more detail below.

The County could consider varying degrees of implementation of each GHG reduction measure, to the degree implementation would be feasible to reach its ultimate 2030 target. However, the CAP that is proposed and evaluated throughout this Draft SEIR has

recommended the full spectrum of feasible GHG reduction measures at the levels that reductions can be feasibly attained and estimated. This Draft SEIR has programmatically evaluated and disclosed the potential environmental impacts of implementation of the selected set of reduction measures based on the best available information regarding the technical and economic feasibility of those measures. These measures would be implemented in an adaptive management format, where implementation of the measures would be monitored on a yearly basis and adjustments to the CAP would be made as needed to ensure that reduction targets would be met. Therefore, this Draft SEIR appropriately evaluates the landscape of environmental impacts that could potentially occur with all reduction measures considered.

The purpose of an alternatives analysis is to identify alternatives that reduce or avoid the significant impacts of the project. As summarized above and evaluated throughout the Draft SEIR, significant environmental impacts were primarily associated with construction effects from implementation of many of the measures across all sectors, operational impacts to sensitive receptors associated with odors for new or expanded solid waste facilities, and construction and operational impacts associated with implementation of renewable energy facilities through GHG Reduction Measure E-2.1.

Significant construction-related impacts would occur across all sectors. An alternative that would reduce the construction-related impacts in one sector, would require implementation of additional projects in another sector such that the overall magnitude and type of construction-related impacts would not change substantially. Within the context of CEQA, this would not offer an alternative that would reduce or avoid the significant impacts of the project.

While commenters may suggest that certain GHG reduction measures be pursued, funded, or supported to a greater degree than others, as described above, the County has proposed a CAP that based on its assessment of local conditions, regulatory requirements, and feasibility, provides a full spectrum of feasible GHG reduction measures at levels that can be feasibly achieved and estimated. The Draft SEIR provides potential alternatives that considered the elimination of environmental impacts from each of the sectors where significant impacts would occur, fulfilling its obligations under CEQA. As described in CEQA Guidelines Section 15126.6(a),

“An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives.”

The Draft SEIR provides a reasonable range of alternatives for consideration by decisionmakers. The County has considered and evaluated the categories of alternatives that reduce or avoid the significant impacts of the project. As such, evaluation of additional combinations or levels of implementation of the GHG reduction measures is not required nor would it be meaningful to the analysis.

4.3 Alternatives Considered in the Draft SEIR

As indicated by the objectives listed above, the project is designed to achieve consistency with state law regarding GHG emissions reduction targets. The CAP is intended to reduce GHGs by improving multimodal transportation and ridesharing options, improving fuel efficiency, increasing building energy efficiency, increasing renewable energy use and access, increasing waste diversion, increasing water conservation, and reducing emissions from agriculture.

A total of four representative alternatives, including the CEQA required No Project Alternative, are evaluated in this Draft SEIR. For each alternative, a brief discussion of its principal characteristics is followed by an analysis of anticipated environmental impacts. The emphasis of the analysis is on the alternative's relative adverse effects compared to the project and a determination of whether the alternative would reduce, eliminate, or create new or greater significant impacts. The analysis also considers each alternative's potential achievement of project objectives. The alternatives are described below.

4.3.1 No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the environmental impacts of the No Project Alternative, to examine and compare the potential environmental consequences associated with not approving the CAP, GPA, GHG Threshold, and Guidelines.

This alternative assumes that development would occur under the existing 2011 GPU as adopted, but without a qualified CAP as a mechanism to mitigate the GHG emissions that are resultant from the build-out of the 2011 GPU.

4.3.1.1 Description and Setting

The No Project Alternative assumes that the CAP, GPA, GHG Threshold, and Guidelines would not be adopted or implemented. As a result, the County would not adopt strategies, measures, and supporting efforts to reduce GHG emissions in accordance with state-legislated reduction targets. Existing conditions for each environmental issue as described in Chapters 2.0 and 3.0 of this Draft SEIR would be unchanged.

Under the No Project Alternative, none of the GHG reduction measures or supporting efforts set forth by this CAP would be implemented to reduce GHG emissions from buildout of the 2011 GPU. While new development in the County would continue to be reviewed for project consistency with screening levels established by the guidance provided by California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change White Paper (2008), energy efficiency and GHG reduction measures at the level anticipated under the CAP would likely not be implemented without the CAP requiring them. While individual projects would need to demonstrate compliance with applicable regulations, a mechanism by which the County could enforce reductions (i.e., CAP Consistency Checklist) and ensure communitywide targets could be met, would not be in place. The County also would not have a tracking and monitoring system in place

to monitor its progress towards achieving state reduction targets. Without a CAP, individual projects would be responsible for demonstrating GHG reductions on a project-by-project basis through a variety of mechanisms (e.g., design features, offsets, incentives). Also, as stated in the CAP, Chapter 3, the County is projected to meet the 2020 target as required in the 2011 GPU. Under the No Project Alternative, the County would not have a program in place to meet the legislative reduction targets in SB 32 of 40% below 1990 levels by 2030. In addition, without a CAP in place, the No Project Alternative would not achieve any of the SEIR's project objectives and would not provide a streamlining mechanism for future development projects to evaluate their GHG impacts.

4.3.1.2 Comparison of the Effects of the No Project Alternative to the Significant Effects Associated with the CAP

As described above, under the No Project Alternative the CAP, GPA, GHG Threshold, and Guidelines would not be implemented. As a result, the County would not have a mechanism by which to meet SB 32 legislative requirements for GHG emissions. Further, the County would still be obligated to ensure that development under the 2011 GPU would comply with legislative requirements for GHG emissions. Compliance with these requirements would be achieved through individual project-level analysis for all development projects subject to discretionary review.

As a result, many of the physical environmental impacts identified in the Draft SEIR could still occur. The No Project Alternative would not satisfy the County's obligation under Mitigation Measure CC-1.2 of the 2011 GPU PEIR, which requires the preparation of a CAP to achieve reduction targets. While the project results in changes to the adopted mitigation of the 2011 GPU PEIR (Mitigation Measure CC-1.2) and concluded that even with implementation of this mitigation significant GHG impacts associated with the 2011 GPU could occur for 2050, this alternative eliminates the mechanism by which the County could effectively reduce GHG emissions and meet legislative requirements for 2030. While GHG impacts would be assessed on a project-by-project basis, without the project in place, it may be more difficult for the County to achieve compliance and could result in inconsistencies with legislative requirements. Therefore, this alternative could result in greater GHG impacts. As stated above, this alternative would support achievement of 2020 reduction targets because the County is on track to meet those targets; however, this alternative would not advance any of the other project objectives. Further, this alternative would not provide a streamlining mechanism for future development projects to evaluate their GHG impacts.

4.3.2 Enhanced Direct Investment Program Alternative

This alternative would implement GHG Reduction Measure E-2.1 without the renewable energy program option. In lieu of the that program, the County would need to pursue other GHG reduction measures. As described in the CAP, a Direct Investment Program (GHG Reduction Measure T-4.1) could offer significant GHG reduction benefits. Therefore, under this alternative, the County would pursue direct investments in local projects to offset carbon emissions to a greater degree than currently proposed in the CAP.

4.3.2.1 Description and Setting

Under this alternative, the CAP, GPA, GHG Threshold, and Guidelines would be adopted and implemented, similar to the project. However, this alternative would pursue a greater level of direct investment projects in exchange for eliminating the renewable energy program component of GHG Reduction Measure E-2.1. As described above under the Distributed Generation Alternative, by eliminating the renewable energy program component, this alternative would eliminate the induced demand for potentially larger and a greater number of large-scale renewable energy systems. While large-scale renewable energy systems could still be developed and their associated impacts could occur, this alternative would eliminate the induced demand for these systems; thereby reducing the total number of systems that would occur within the County.

All other GHG reduction measures set forth by the CAP would be implemented in the same manner and level as the project, except for Measure T-4.1 (Direct Investment Program). The renewable energy program proposed under the project would result in 90% renewable energy resources for the unincorporated County. The large-scale renewable energy component of this measure would account for a reduction of 227,423 MTCO_{2e} in 2030. Under this alternative, the desired GHG emissions reductions targets of the CAP would be achieved by implementing a greater number of direct investment projects. Direct investment projects include projects implemented in compliance with established protocols including but not limited to: biomass conversion to energy or soil application projects (i.e., conversion of biomass waste to fuel for electricity generation, or conversion of forestry and agricultural residues to soil compost), boiler efficiency upgrades (i.e., implementing retrofits to increase thermal efficiency in natural-gas fired boilers or process heaters), coastal wetlands creation projects (i.e., restoring degraded wetlands to recapture soil carbon stock), reforestation projects (i.e., planting of trees to recapture CO₂ sinks), compost additions to rangeland projects (i.e., increasing soil carbon sequestration and improving quality of soils), organic waste digestion projects (i.e., diverting organic waste and/or wastewater to a biogas control system), livestock management projects (i.e., installing biogas control systems for manure management on dairy cattle and swine farms), and winterization projects (i.e., energy efficiency upgrades to buildings). See Appendix B of the Draft SEIR for a range of the potential protocols that may be used for direct investments in local projects.

These programs would require the County to invest more heavily in direct investment projects than currently proposed under the project to achieve greater emission reductions. The emissions reductions from the enhanced direct investment would replace the emissions reductions that would have been provided by the renewable energy program. Through this investment, the County would need to generate and retire additional carbon offset credits to make up the emissions reductions that would otherwise be achieved through the renewable energy program. For this to occur, the County would need to investigate if sufficient direct investment opportunities are available locally to generate an additional 227,423 MTCO_{2e} of reductions.

Under this alternative, the County would reduce community-wide and County operations GHG emissions in compliance with state-legislated targets. Upon approval, new

development in the County would be reviewed for consistency with the CAP, GHG Threshold, and Guidelines and may be eligible for a streamlined environmental review under CEQA Guidelines Section 15183.5. All energy efficiency measures would be implemented as described under the CAP, which would result in a reduction in county-wide energy consumption. The renewable energy program would not be implemented, which would reduce the construction and operational impacts of large-scale renewable energy facilities that were induced by the program. However, some level of construction and operational impacts for large-scale renewable energy facilities would still occur because construction of these facilities would be allowable subject to the County's ordinances, policies, and standards. Finally, the County would be able to meet the targets established under SB 32 legislation provided that sufficient opportunities to generate the requisite amount of local direct investments are available. The Enhanced Direct Investment Program Alternative would achieve all project objectives.

4.3.2.2 Comparison of the Effects of the Enhanced Direct Investment Program Alternative to the Significant Effects Associated with the CAP

The potentially significant environmental effects resulting from the Enhanced Direct Investment Program Alternative are described below, along with comparisons of these impacts to the project.

Aesthetics: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant scenic vista, scenic resource, and nighttime lighting and glare impacts would be reduced compared to the project. However, a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals. As described in Section 2.1, Aesthetics, implementation of direct investment projects could result in significant visual changes to the environment depending on the specific projects implemented. Under this alternative, a greater number of direct investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of project resulting in significant visual impacts. Overall, this alternative would result in visual tradeoffs and impacts would be similar to the project.

Agricultural Resources: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant agricultural and forest land conversion impacts and Williamson Act conflict impacts would be reduced compared to the project. However, a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals. As described in Section 2.2, Agricultural Resources, implementation of direct investment projects could result in significant agricultural resources impacts depending on the specific projects implemented. Under this alternative, a greater number of direct

investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of project resulting in significant agricultural impacts. Overall, this alternative would result in agricultural tradeoffs and impacts would be similar to the project.

Air Quality: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative construction-related air quality impacts associated with this measure would be reduced. However, the typical construction impacts associated with direct investment involving larger construction projects (e.g., wetlands creation) would occur, and a greater number of these projects may be required to meet the 2030 reduction goals. This could still result in the exceedance of federal and state ambient air quality standards and criteria pollutants. Therefore, while this alternative would result in substantial reductions in construction-related air quality impacts associated with a fewer number of large-scale renewable energy projects, significant and unavoidable project and cumulative air quality impacts would still occur associated with direct investment projects. Overall, this alternative would result in air quality tradeoffs and air quality impacts would be similar to the project.

Biological Resources: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative impacts to special-status species, riparian habitat, and conflicts with wildlife movement corridors would be reduced. However, a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals. As described in Section 2.3, Biological Resources, implementation of a greater number of direct investment projects could result in significant biological resources impacts depending on the specific projects implemented. Under this alternative, a greater number of direct investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of project resulting in significant biological resources impacts. Overall, this alternative would result in biological tradeoffs and impacts would be similar to the project.

Cultural Resources: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative historic and cultural resources impacts would be reduced. However, a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals. As described in Section 2.4, Cultural Resources, implementation of a greater number of direct investment projects could result in significant cultural resources impacts depending on the specific projects implemented. Under this alternative, a greater number of direct investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of projects

resulting in significant cultural resources impacts. Overall, this alternative would result in cultural tradeoffs and impacts would be similar to the project.

Greenhouse Gases: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. In exchange, additional direct investment projects would be implemented to replace the GHG reductions that would be achieved through the renewable energy program. Both large-scale renewable energy projects and direct investment projects (see Section 2.7, Greenhouse Gas Emissions) would result in significant construction-related GHG impacts and, therefore, would have overall similar GHG impacts. However, both the project and this alternative would meet 2020 and 2030 reduction targets established in the CAP and because the same total amount of GHG emissions would be achieved, this alternative would result in similar significant impacts related to the 2050 GHG reduction goal in the CAP (i.e., goal would not be achieved).

Hazards and Hazardous Materials: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative wildfire impacts would be reduced, although not eliminated. While a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals, as described in Section 2.8, Hazards and Hazardous Materials, implementation of direct investment projects would not result in significant wildfire impacts because many of these projects would be implemented in urbanized areas, or at existing operations such that the potential for wildfire impacts would be minimized. Therefore, this alternative would reduce the project's significant and unavoidable wildfire impacts and overall impacts would be less.

Hydrology and Water Quality: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative groundwater supply impacts would be reduced. However, a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals. As described in Section 2.9, Hydrology and Water Quality, implementation of a greater number of direct investment projects could result in significant groundwater supply impacts depending on the specific projects implemented (e.g., reforestation, wetlands creation). Under this alternative, a greater number of direct investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of project resulting in significant hydrology and water quality impacts. Overall, this alternative would result in hydrology and water quality tradeoffs and impacts would be similar to the project.

Land Use: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of

large-scale systems would be developed and the significant and unavoidable project and cumulative division of an established community impacts would be reduced, although not eliminated. While a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals, as described in Section 2.10, Land Use, implementation of direct investment projects would not result in significant division of an established community impacts because many of these projects would be implemented in urbanized areas, at existing operations, or in open areas such that the potential for division of an established community would be minimized. Therefore, this alternative would reduce the project's significant and unavoidable land use impacts and overall impacts would be less.

Noise: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative operational noise impacts would be reduced, although not eliminated. While a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals, as described in Section 2.11, Noise, implementation of direct investment projects would result in projects with less operational noise because many of these projects would be energy efficiency improvements to existing facilities where operational noise activities are permissible or would not have an operational noise component (e.g., wetlands creation, compost additions to land, reforestation). Therefore, this alternative would reduce the project's significant and unavoidable operational noise impacts and overall impacts would be less.

Transportation and Traffic: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative operational traffic and hazardous design feature impacts would be reduced, although not eliminated. While a greater number of direct investment projects would be implemented to provide the additional GHG reductions needed to meet 2030 goals, as described in Section 2.12, Transportation and Traffic, implementation of direct investment projects would not result in significant operational traffic impacts or hazardous design feature impacts because many of these projects would be energy efficiency improvements to existing facilities or would not have an operational component (e.g., wetlands creation, compost additions to land, reforestation). Therefore, this alternative would reduce the project's significant and unavoidable transportation impacts and overall impacts would be less.

Tribal Cultural Resources: Under this alternative, the renewable energy program would not be implemented and the induced demand for large-scale wind, solar photovoltaic, and geothermal renewable energy systems would not occur. As a result, a fewer number of large-scale systems would be developed and the significant and unavoidable project and cumulative impacts to undiscovered tribal cultural resources would be reduced, but would not be eliminated. As described in Section 2.13, Tribal Cultural Resources, implementation of a greater number of direct investment projects could result in significant

undiscovered tribal cultural resources impacts depending on the specific projects implemented. Under this alternative, a greater number of direct investments would occur in exchange for the reduced number of large-scale renewable energy projects, both types of project resulting in significant tribal cultural resources impacts. Overall, this alternative would result in tribal cultural resources tradeoffs and impacts similar to the project.

4.3.3 100% Renewable Energy Alternative

This alternative would implement a CAP reduction measure that would increase renewable energy consumption from 90% proposed under the project to 100% renewable energy by 2030.

4.3.3.1 Description and Setting

This alternative would result in the implementation of the CAP with increased reliance upon renewable energy to meet the reduction targets in the CAP for 2030. This alternative assumes that 100% of the energy consumed in the unincorporated County would be produced from renewable sources. The project in comparison assumes 90% renewable energy consumption (GHG Reduction Measure E-2.1). This would be achieved in the same manner as the CAP, with increased reliance on large-scale solar photovoltaic, wind, and geothermal facilities, and small-scale residential wind and solar sources.

Under this alternative, the County would reduce community-wide and County operations GHG emissions in compliance with state-legislated targets. Upon approval, new development in the County would be reviewed for consistency with the CAP, GHG Threshold, and Guidelines, and may be eligible for a streamlined environmental review under CEQA Guidelines Section 15183.5. All energy efficiency measures would be implemented as described under the CAP, which would result in a reduction of energy consumption and the production of associated GHG emissions. In this scenario, the amount of GHG emissions reductions that would be achieved by the County would meet the targets established under SB 32 legislation. Therefore, the 100% Renewable Energy Alternative would achieve all project objectives.

4.3.3.2 Comparison of the Effects of the 100% Renewable Energy Alternative to the Significant Effects Associated with the CAP

The anticipated environmental effects resulting from the 100% Renewable Energy Alternative are described below, along with comparisons of these impacts to the project.

Aesthetics: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to impacts on scenic vistas, scenic resources, visual character or quality, and light and glare. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other visual impacts would be similar to the project because the same suite of GHG reduction

measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable scenic vista, scenic resource, visual character and quality, and nighttime lighting and glare impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Agricultural Resources: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to impacts on agricultural and forestry lands and Williamson Act conflicts. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other agricultural resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable agricultural resources impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Air Quality: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that would increase the significant and unavoidable construction-related air quality impacts that could occur. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other air quality impacts would be similar to the project because the same potential for odor impacts (associated with solid waste reduction measures), which can be reduced to less than significant with mitigation, and impacts to sensitive receptors (construction and operation impacts) would remain because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have greater significant and cumulatively considerable construction-related air quality impacts because a greater number of large-scale renewable energy projects would be required.

Biological Resources: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to impacts on special-status species. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other biological resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable biological resources impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Cultural Resources: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to impacts on archaeological and paleontological resources. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other cultural resources impacts (e.g., paleontological resources and human remains) would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable archaeological and paleontological resources impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Greenhouse Gas Emissions: This alternative would increase the amount of renewable energy sources that would be needed to meet the CAP reduction targets; therefore, a greater number or additional acreage of renewable energy projects would be required. As described for the project, no significant GHG impacts would occur related to 2020 and 2030 targets because while individual measures may have GHG emissions associated with construction or operation, the overall purpose of the measures would be to reduce the amount of GHG emissions associated with energy consumption in the County, and achieve the GHG emission reduction targets identified in the CAP. A greater percentage of energy being derived from renewable energy sources would result in a greater amount of GHG reductions. It is estimated that this alternative could result in approximately 52,655 of additional GHG reductions in 2030. Therefore, this alternative would result in less GHG impacts compared to the project. Further, this alternative would bring the County closer to achieving the 2050 GHG reduction goal; however, while this alternative would reduce the 2050 gap, a significant and unavoidable impact would remain as it is not known with certainty that the goal would be met.

Hazards and Hazardous Materials: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to wildfire impacts. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other hazard and hazardous material impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable wildfire impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Hydrology and Water Quality: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas

of renewable infrastructure that could contribute to impacts on hydrology and water quality (e.g., large-scale geothermal and solar facilities). Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other hydrology and water quality impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable hydrology and water quality impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Land Use: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to impacts related to division of an established community. All other land use impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable division of an established community impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Noise: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to operational noise impacts from large-scale wind projects. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other noise impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable operational noise impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale wind projects could be required.

Transportation and Traffic: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could contribute to construction and operational traffic impacts from large-scale renewable energy projects. Further, if the renewable energy projects required to meet the demand were concentrated in any one area of the County, the impacts could be localized. All other transportation impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable transportation impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

Tribal Cultural Resources: Because of the increased reductions that would be required to be provided through renewable energy sources, this alternative could potentially increase the number of and/or size of large-scale renewable energy projects that would be required to meet proposed reduction targets. This could expand the areas of renewable infrastructure that could result in the disturbance of undiscovered tribal cultural resources. All other tribal cultural resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. This alternative would have significant and cumulatively considerable tribal cultural resources impacts, similar to the project; however, this alternative could increase the magnitude of impacts because a greater number of large-scale renewable energy projects would be required.

4.3.4 Increased Solid Waste Diversion Alternative

This alternative would implement a CAP reduction measure that would increase solid waste diversion from 75% in 2030 proposed under the project to 80% by 2030.

4.3.4.1 Description and Setting

This alternative would result in the implementation of the CAP with increased reliance upon solid waste diversion to achieve additional GHG reductions. Currently, GHG Reduction Measure SW-1.1 would result in 57,103 MTCO₂e in GHG reductions by 2030. This alternative assumes that the County would achieve a 5% increase in the diversion rate of solid waste county-wide by 2030. This would further accelerate the reduction that would occur over the life of the project and would provide approximately 74,572 MTCO₂e in additional GHG reductions by 2030. To achieve this increased diversion rate, the County would devote additional resources to expanding the capacity of its solid waste diversion facilities. This could require the expansion of existing facilities or the construction of new facilities to handle the solid waste to meet the increased diversion rate.

Upon approval, new development in the County would be reviewed for consistency with the CAP, GHG Threshold, and Guidelines and may be eligible for a streamlined environmental review under CEQA Guidelines Section 15183.5. All energy efficiency measures would be implemented as described under the CAP, which would result in a reduction of energy consumption and the production of associated GHG emissions. Under this alternative, the County would reduce community-wide and County operations GHG emissions in compliance with state-legislated targets, would meet the 2020 and 2030 reduction goals of the CAP, and would achieve additional GHG reductions compared to the project. These additional GHG reductions would reduce the gap of emission reductions needed to meet the 2050 reduction goal. Therefore, the Increase Solid Waste Diversion Alternative would achieve all project objectives and would further reduce GHG emissions in the County. With additional GHG reductions, this alternative would reduce the gap to the 2050 GHG reduction goal compared to the project.

4.3.4.2 Comparison of the Effects of the Increased Solid Waste Diversion Alternative to the Significant Effects Associated with the CAP

Aesthetics: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts because most infrastructure improvements would occur within existing developed facilities or in areas designated for such uses. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize visual resources impacts. All other visual impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts and would not have a considerable contribution to significant impacts, similar to the project.

Agricultural Resources: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have less-than-significant agricultural and forestry resources impacts and Williamson Act conflict impacts because most infrastructure improvements would occur within existing developed facilities or in areas designated for such uses. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize agricultural resources impacts. All other agricultural and forestry resource impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant agricultural resources impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project.

Air Quality: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have significant air quality construction, criteria air pollutant, odor, and sensitive receptor impacts, odor impacts, and would result in potentially significant conflicts with regional air quality standards. Construction of new or expanded facilities under this alternative would likely increase these impacts. While all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize air quality impacts, depending on the size of the facilities, these measures may not be able to fully mitigate the impacts to a less-than-significant level. All other air quality impacts would be similar

to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. Because this alternative would increase the size or number of facilities that would be required to meet the increased diversion rate, this alternative would result in greater air quality impacts compared to the project.

Biological Resources: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have significant wildlife movement corridor and nursery site impacts. Construction of new or expanded facilities under this alternative would likely increase these impacts. While all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize biological impacts, depending on the size of the facilities, these measures may not be able to fully mitigate the impacts to a less-than-significant level. All other biological impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. Because this alternative would increase the size or number of facilities that would be required to meet the increased diversion rate, this alternative would result in greater biological resources impacts compared to the project.

Cultural Resources: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have less-than-significant historic, archaeological, paleontological, and human remains impacts because individual projects would be required to undergo the County's discretionary review process which includes CEQA, and would be required to mitigate all resultant significant impacts to the extent feasible. All other cultural resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant cultural resources impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project.

Greenhouse Gas Emissions: The increase in solid waste diversion that would occur under this alternative would result in additional GHG reductions compared to the project. As described for the project, no significant GHG impacts would occur related to 2020 and 2030 targets because while individual measures may have GHG emissions associated with construction or operation, the overall purpose of the measures would be to reduce the amount of GHG emissions countywide, and achieve the GHG emission reduction targets identified in the CAP. It is estimated that this alternative could result in approximately 74,572 MTCO_{2e} of additional GHG reductions. Therefore, this alternative would result in less GHG impacts compared to the project. Further, this alternative would bring the County closer to achieving the 2050 GHG reduction goal. Nonetheless, a significant and unavoidable impact regarding the 2050 GHG reduction goal would remain because the additional GHG reductions would not be enough to reach the 2050 goal.

Hazards and Hazardous Materials: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have less-than-significant wildfire impacts because most infrastructure improvements would occur within existing developed facilities or in areas designated for such uses. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize wildfire impacts. All other hazard and hazardous materials resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant wildfire impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project.

Hydrology and Water Quality: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would result in less-than-significant hydrology and water quality impacts because most infrastructure improvements would occur within existing developed facilities and would be served by municipal water supplies. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize hydrology and water quality impacts. All other hydrology and water quality impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant hydrology and water quality impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project.

Land Use: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would result in less-than-significant division of an established community and conflicts with policy impacts because most infrastructure improvements would occur within existing developed facilities. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize land use impacts. All other land use impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. The expanded solid waste facilities would have less-than-significant land use impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project.

Noise: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities.

This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have significant construction-related noise impacts. Construction of new or expanded facilities under this alternative would likely increase these impacts. While all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize construction-related noise impacts, depending on the size of the facilities, these measures may not be able to fully mitigate the noise impacts to a less-than-significant level. All other noise impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. Because this alternative would increase the size or number of facilities that would be required to meet the increased diversion rate, this alternative would result in greater noise impacts compared to the project.

Transportation: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have significant construction and operational traffic impacts. While all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize traffic impacts, depending on the size of the facilities, these measures may not be able to fully mitigate the traffic impacts to a less-than-significant level. All other traffic impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. Because this alternative would increase the size or number of facilities that would be required to meet the increased diversion rate, this alternative would result in greater transportation impacts compared to the project.

Tribal Cultural Resources: Because of the increased diversion that would be required, this alternative could potentially increase the number of and/or size of new or expanded solid waste facilities. This could expand the areas of solid waste recovery, composting, and recycling of materials. As described for the project, solid waste expansion projects would have significant impacts related to the disturbance of undiscovered resources. Construction of new or expanded facilities under this alternative would likely increase these impacts. While all development proposals would be required to undergo review by the County and would be required to comply with adopted 2011 GPU policies and 2011 GPU PEIR mitigation measures that would minimize construction-related impacts related to the disturbance of undiscovered resources, depending on the size of the facilities, these measures may not be able to fully mitigate the tribal cultural resources impacts to a less-than-significant level. All other tribal cultural resources impacts would be similar to the project because the same suite of GHG reduction measures and supporting efforts would be implemented. Because this alternative would increase the size or number of facilities that would be required to meet the increased diversion rate, this alternative would result in greater tribal cultural resources impacts compared to the project.

4.3.5 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires that if an EIR determines that the No Project Alternative is environmentally superior to the project, the EIR must identify an environmentally superior alternative among the other alternatives considered. **Table 4-1** provides a summary comparison of the impacts of the project and alternatives. As described above, the No Project Alternative would not be environmentally superior to the project because it would not meet SB 32 reduction targets and would not reduce any of the projects significant environmental impacts. Therefore, this alternative would result in a new significant GHG impact that was not previously identified for the project.

Based on review of the other alternatives considered, the County has determined that the Enhanced Direct Investment Program Alternative would be environmentally superior to the project because it would reduce significant and unavoidable impacts related to the induced demand for large-scale renewable energy systems while still achieving both the primary objective of GHG emissions reductions consistent with SB 32 and all other supporting project objectives.

The 100% Renewable Energy Alternative would result in greater GHG reductions, and, therefore, lesser GHG impacts, compared to the project because this alternative would have a greater amount of county-wide energy demands generated from renewable energy resources. This alternative would also help close the gap to the 2050 reduction goal because of the additional GHG reductions; however, this impact would remain significant and unavoidable. While GHG impacts would be less, overall impact conclusions for all other resource categories would be the same as the project and this alternative could increase the magnitude of these impacts because a greater number of large-scale renewable energy projects would be required.

The Increased Solid Waste Diversion Alternative would result in greater GHG reductions, and, therefore, lesser GHG impacts, compared to the project because this alternative would have a greater amount of waste diversion within the county. This alternative would also help close the gap to the 2050 reduction goal because of the additional GHG reductions; however, this impact would remain significant and unavoidable. While GHG impacts would be less, overall impact conclusions for other resource categories would be the same as the project for aesthetics, agricultural resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and noise. In addition, this alternative would result in greater impacts to air quality, biological resources, transportation, and tribal cultural resources. Overall, this alternative would result in environmental tradeoffs compared to the project.

Table 4-1 CAP Alternatives Comparison of Impacts

Issue Areas of Significance	CAP	Alternatives to the Proposed Project			
		1	2	3	4
		No Project	Enhanced Direct Investment	100 Percent Renewable Energy	Increased Solid Waste Diversion
2.1 Aesthetics	SU	▼	—	▲	—
2.2 Agricultural Resources	SU	▼	—	▲	—
2.3 Air Quality	SU	▼	—	▲	▲
2.4 Biological Resources	SU	▼	—	▲	▲
2.5 Cultural Resources	SU	▼	—	▲	—
2.6 Energy	LTS	▲	—	▼	▲
2.7 Greenhouse Gas Emissions	SU	▲	—	▼	▼
2.8 Hazards and Hazardous Materials	SU	▼	▼	▲	—
2.9 Hydrology and Water Quality	SU	▼	—	▲	—
2.10 Land Use	SU	▼	▼	▲	—
2.11 Noise	SU	▼	▼	▲	▲
2.12 Transportation	SU	▼	▼	▲	▲
2.13 Tribal Cultural Resources	SU	▼	—	▲	▲

▲ Alternative is likely to result in greater impacts to issue when compared to proposed project.

— Alternative is likely to result in similar impacts to issue when compared to proposed project.

▼ Alternative is likely to result in reduced impacts to issue when compared to proposed project.

LTS Less than Significant with mitigation measures

SU Potentially significant and unavoidable impact

This page intentionally left blank.