E. Alternatives

E.1 Introduction

The 2010 Final EIR analyzed a reasonable range of alternatives to the proposed project, including presentation of a detailed analysis of four alternatives in addition to the required "no project" alternative. The Final EIR also described five additional alternatives that were considered but eliminated from further analysis because they were infeasible. Section E of the 2010 Final EIR provides extensive information on the development and screening of those project alternatives.

This section considers whether the new or modified project components analyzed in this Supplemental EIR or new information relating to the previously analyzed alternatives alter any conclusions regarding either the comparison of the Revised Project to the alternatives analyzed in the 2010 Final EIR or the identification of the environmentally superior alternative. In this case, the Supplemental EIR did not identify any new significant impacts resulting from the changes incorporated in the Revised Project that warrant the consideration of additional project alternatives. Like the originally Proposed Project described in the 2010 Final EIR and the Approved Project, the Revised Project would continue to have significant and unavoidable impacts related to noise and aesthetics. The 2010 Final EIR identified and analyzed several reduced density alternatives and an off-site alternative that would substantially lessen these significant impacts as well as other impacts of a solar project in Panoche Valley.

It should be noted that an EIR is not required to consider alternatives to a component of the project. Rather, the alternatives analysis in the 2010 Final EIR appropriately considered alternatives to the project as a whole, which was the construction and operation of the original 420 MW project. As described in Sections A and B, the County approved one of the reduced density alternatives that was developed and analyzed in the Final EIR: the 399 MW "Alternative A Revised," which is now the Approved Project. The Board found that the other four Alternatives were infeasible when it certified the 2010 Final EIR and approved the Alternative A Revised. In 2014, the Approved Project was further reduced in size and reconfigured to create the Revised Project evaluated in Section C of this Supplemental EIR. Section C compares the Revised Project with Alternative A Revised (the Approved Project), from the 2010 EIR.

E.2 Comparison of the Revised Project to Project Alternatives

The 2010 Final EIR analyzed five alternatives to the 420 MW project. A brief summary of each alternative and how the Revised Project compares to each alternative is analyzed below. To the extent new information about one or more alternatives has surfaced since certification of the 2010 Final EIR, that information is presented in the specific discussion of that alternative.

E.2.1 No Project Alternative

Under the No Project Alternative, construction and operation of Panoche Valley Solar Project would not occur. The baseline environmental conditions for the No Project Alternative are the same as for the Proposed Project. The baseline conditions would continue to occur into the future, undisturbed, in the absence of project-related construction activities, unless other development occurred on the site.

The objectives of the Proposed Project would remain unfulfilled under the No Project Alternative. This means that the contribution of the Proposed Project to meeting California's renewable generation goals would not occur. There are three possibilities for the No Project Alternative to the Proposed Project:

1. **The current uses of the project site would be retained**. The site would remain undeveloped and would continue to be grazed.
2. **Development of other solar projects could occur in the Panoche Valley**. Given the transmission capacity available to serve generation in the Panoche Valley, it is possible that other solar projects would be proposed in the Panoche Valley. If this occurs, the impacts would likely be similar, but smaller, to those of the Proposed Project as no solar PV projects of this scale have been built to date in the United States.
3. **Development of solar projects could occur in other parts of the County or northern California Counties**. If the County determines that development of the Proposed Project is not appropriate in the Panoche Valley and because the State has required utilities to deliver at least 33 percent of their electricity from renewable sources, it is foreseeable that a similarly sized solar facility would be proposed and possibly constructed in another part of the County or constructed in other northern California counties of the State, and/or that distributed solar PV development would occur throughout the State.

E.2.2 Alternative A Revised

Alternative A Revised is described and analyzed in Section E.3.1 of the 2010 Final EIR. Alternative A Revised is illustrated in Figure E-1 (at the end of this section) and was ultimately the alternative adopted by the Board of Supervisors when it certified the 2010 Final EIR and approved the project and is referenced in this SEIR as the Approved Project. A key element of this alternative was the provision of a biological conservation easement on the 1,683 acres of the project site that would be avoided by the rearrangement of panels. Another key element of this alternative was the reduction of panel height to 12.5 feet (compared with 25 feet for the proposed project). This alternative would be located on approximately 3,202 acres and would consist of 53 1-MW power blocks and 173 2-MW power blocks, which would generate 399 MW of power. This alternative would be constructed in phases over a five-year period just like the larger 420 MW project that was analyzed as the "project" in the Final 2010 EIR. This alternative also would have warranted upgrades to PG&E's transmission lines; however, the extent of those upgrades was unknown at the time of certification of the 2010 Final EIR. .

Alternative A Revised eliminated four of the 420 MW project's significant and unmitigable impacts on biological resources, including impacts resulting from the loss of giant kangaroo rat, blunt-nosed leopard lizard, and San Joaquin kit fox habitat. However, Alternative A Revised would continue to have significant and unavoidable aesthetic and noise impacts even though those impacts would be less severe than those of the 420 MW project, due to the smaller project footprint. In addition, the reduced footprint (about 34 percent smaller than the Proposed Project) resulted in a reduction in noise, agriculture, cultural resources, biological resources, water resources impacts. The Final EIR found that this alternative would environmentally superior to the 420 MW Project.

As this SEIR explains in Section B, the Revised Project further reduces the building footprint of Alternative A Revised and therefore compared to Alternative A Revised, the Revised Project would result less severe permanent impacts on most environmental resource areas. However, like Alternative A Revised, the Revised Project would continue to have significant and unavoidable noise and aesthetic impacts.

E.2.3 Alternative B Revised

Alternative B Revised is described and analyzed in Section E.3.2 of the 2010 Final EIR. Alternative B Revised is illustrated in Figure E-2 and would be located on an even small footprint than the Revised Project (approximately 1,394 acres). This alternative would generate 183 MW of power. This alternative was designed to further reduce impacts to high-quality giant kangaroo rat habitat and provide a more extensive north-south San Joaquin kit fox movement corridor along the east side of the valley. This alternative also mitigated habitat impacts with a biological conservation easement on 3,491 acres of the project site that would be avoided by redesigning the configuration of panels. Another key element of this alternative is the reduction of panel height to 12.5 feet (compared with 25 feet for the Proposed Project). The 2010 Final EIR presented revisions to this alternative from the Alternative B that was presented in the 2010 Draft EIR to further minimize impacts. This alternative would be constructed in three phases, with the first 20 MW phase being constructed over one year, followed by one 82 MW phase and one 81 MW phase in the two subsequent years. Approximately 1,048 acres would be permanently disturbed by on-site facilities, and an additional 40 acres would be temporarily disturbed during construction.

Alternative B Revised eliminated and further reduced the four significant and unmitigable impacts on biological resources impacts of the 420 MW project and Alternative A Revised and reduced the significant and unavoidable aesthetic impact due to the visibility of construction equipment to a less than significant level due to the three year, as opposed, to five year construction period. Alternative B Revised also reduced other the impacts of the 420 MW Project and Alternative A Revised due to its even greater reduction in the solar project footprint. Many of the construction related impacts such as air quality, traffic, and noise, for example, would also be substantially lessened when compared to the Approved Project. However, Alternative B Revised would continue to have significant unmitigable permanent visual quality impacts and temporary construction noise impacts.

None of the incremental changes associated with the Revised Project, including the accelerated construction schedule, smaller building footprint, or the PG&E Upgrades would generally change the 2010 Final EIR's analysis of Alternative B Revised. Notwithstanding the further reduction in the project footprint associated with the Revised Project, Alternative B Revised still has a smaller footprint than the Revised Project and would result in incrementally less construction and operational impacts. Given the reduced footprint of Alternative B Revised (about 60% of the size of the Revised Project), the Final EIR's conclusion that this alternative would be environmentally superior to the 420 MW Project and Alternative A Revised (the Approved Project) would also apply to the Revised Project..

E.2.4 Alternative C Revised

Alternative C Revised is described and analyzed in Section E.3.3 of the 2010 Final EIR. Alternative C Revised is illustrated in Figure E-3. It would be located on approximately 862 acres and would generate 110 MW of power. This alternative was designed to fully mitigate direct impacts to biological resources. It would provide both north-south and east-west wildlife movement corridors. This alternative would also mitigate habitat impacts with a biological conservation easement on 4,023 acres of the project site that would be avoided by the rearrangement of panels. Another key element of this alternative is the reduction of panel height to 12.5 feet (compared with 25 feet for the Proposed Project). The 2010 Final EIR presented revisions to this alternative from the Alternative C that was presented in the 2010 Draft EIR to further minimize impacts. This alternative would be constructed in two phases, with the first 20 MW phase being constructed over one year, and the second 90 MW phase being constructed over an

additional year. Approximately 646 acres would be permanently disturbed by on-site facilities, and an additional 20 acres would be temporarily disturbed during construction.

Like Alternative B Revised, Alternative C Revised eliminated all four significant and unmitigable impacts on biological resources and one of the two visual resources impacts relating to visibility of construction activity that would have resulted from construction and operation of the 420 MW Project and Alternative A Revised. This alternative also substantially lessened impacts to aesthetics, agriculture, air quality, land use and recreation, noise, population and housing, public services and utilities, transportation and circulation, and water resources. Due to its substantially smaller footprint, the Final EIR found that Alternative C Revised was environmentally superior to the Proposed Project, Alternatives A Revised, and Alternative B Revised.

None of the incremental changes associated with the Revised Project, including the accelerated construction schedule, smaller building footprint, or the PG&E Upgrades would generally change the 2010 Final EIR's analysis of Alternative B Revised. Notwithstanding the further reduction in the building footprint associated with the Revised Project, Alternative C Revised still has a substantially smaller footprint than the Revised Project and would result in incrementally less construction and operational impacts. Given the reduced footprint of Alternative B Revised (about 37 percent of the size of the Revised Project), the 2010 Final EIR's conclusion that this alternative would be environmentally superior to the 420 MW Project and Alternative A Revised (Approved Project) would also apply to the Revised Project.

E.2.5 Westlands CREZ Alternative

The Westlands CREZ[1] Alternative is an off-site alternative that was described and analyzed in Section E.3.4 of the 2010 Final EIR. The description of this alternative has been updated to reflect changes at Westlands since publication of the Final EIR in 2010. However, the comparison of impacts between this alternative and the 420 MW project has not changed and would equally apply to the Revised Project, except that the Revised Project would be constructed and operated on a much smaller footprint than the originally proposed 420 MW project and a smaller footprint than the Approved Project. The location of the Westlands CREZ is shown in Figure E-4. The Westlands CREZ is located outside of San Benito County within Fresno and Kings County, east of Huron, north of Kettleman City, and southwest of Lemoore (Sheehan, 2010).

The Westlands Water District has a lease contract with Westside Holdings, a private investment group, to use approximately 30,000 acres of fallow agriculture land for a 5,000 MW solar power plant (Sheehan, 2010). The farmland was retired over the past decade because of a combination of water shortages and salt buildup that makes the soil unsuitable for crop production (Sheehan, 2010). Nonetheless, approximately 20,000 acres of this area continue to be encumbered by Williamson Act contracts, which would need to be cancelled before any project could be constructed. According to the developer, Westside Holdings LLC, the Westlands Solar Park in western Kings County has a potential solar resource of up to 2,400 MW. It is comprised of agricultural lands that are no longer in productive use (Westside, 2014).

[1] A CREZ is a Competitive Renewable Energy Zone, defined in the State's Renewable Energy Transmission Initiative (RETI).

In July 2014, Los Angeles-based real estate investment firm CIM Group announced it has partnered with Westside Holdings, LLC, to invest in development of solar resources at Westlands (Lindt, 2014). No development specifics have been made available (Lindt, 2014).

The Westlands Solar Park is being made available to solar developers for phased generation development. Since this alternative was initially evaluated in 2010, two solar projects (18 and 15 MW) have been constructed at Westlands (see Section D, Cumulative Scenario, Table D-2). In addition, the City of Anaheim has executed a Power Purchase Agreement with Westlands for a 2 MW project to be located just south of Naval Air Station Lemoore, with phased construction of a 2-MW project followed by a 20-MW solar farm (Anaheim, 2013; Lindt, 2014).

Also, on March 15, 2013, Westlands issued a Notice of Preparation for a Master EIR for development within the solar park (Westlands, 2013). In the NOP, the proposed components of the solar area are defined as follows:

- Westlands Solar Park Master Plan and Planned Transmission Facilities, comprises following 4 elements:
  - 1) WSP Generating Facilities - 24,000-acre site planned for 2,400 MW solar PV generating facilities, phased in 200 MW projects.
  - 2) Henrietta to Gates Transmission Upgrades - Construct a second transmission line along existing 230-kV Henrietta-Gates line.
  - 3) Path 15 Transmission Corridor - Upgrade to connect Gates Substation to Los Banos Substation; transmission route diverges from existing transmission corridor near SR 198, runs through interior of Westlands Water District, and rejoins corridor at Panoche Substation.
  - 4) Gates to Gregg Transmission Corridor - New transmission route running north from Gates substation and over San Joaquin River where it swings northeast and east through Madera County, then crosses SR-99 on approach to Gregg Substation.

A Draft Master EIR has not yet been published.

One component of the Westlands master plan is the definition of a transmission corridor for the Gates to Gregg transmission line. Pacific Gas and Electric Company (PG&E), MidAmerican Transmission, LLC (MidAmerican Transmission), and Citizens Energy Corporation (Citizens Energy) were chosen by the California Independent System Operator Corporation (ISO) to develop, own and operate this new transmission line in the Central Valley. According to PG&E, the 230-kilovolt (kV) line will span about 70 miles across Fresno, Madera and Kings Counties, running from the Gates to Gregg substations, which are owned and operated by PG&E. It was approved by the ISO to address the growing power demand in the greater Fresno area and also to bolster efforts to integrate renewable energy onto the electric grid. PG&E stated that the transmission line would be operational by 2022, but could come on line earlier (PG&E, 2013). On September 18, 2014, the Federal Energy Regulatory Commission granted PG&E transmission rate incentives for its investment in this transmission line (Lum, 2014).

As with any solar generation project, definition of specific transmission line availability would be required, and if transmission line upgrades were needed, they would have to be evaluated under CEQA and/or NEPA.

The 2010 Final EIR found that the majority of the impacts created by a 420 MW solar PV project would be relocated to the Westlands CREZ Alternative site, except for impacts to biological resources, agricultural resources, and aesthetics, which would be substantially lessened at Westlands. The 2010

Final EIR concluded that relocating the project to the Westlands CREZ would potentially create greater impacts to water resources. The incremental changes associated with the Revised Project, including the accelerated construction schedule, smaller project footprint, and the PG&E Upgrades would not generally change the 2010 Final EIR's analysis of the Westlands CREZ Alternatives. However, in conjunction with the Board's certification of the 2010 Final EIR, the Board also conditionally approved cancellation of the Williamson Act contracts affected by the Approved Project. The vast majority of the Westlands CREZ is still under Williamson Act contracts; therefore, the Revised Project would have less agricultural impacts due to approved cancellations of Williamson Act contracts.

E.3 Alternatives Considered but Eliminated from Further Consideration

Section E.4 of the 2010 Final EIR also considered, but rejected as infeasible, the following five alternatives that did not meet the CEQA screening criteria defined in Section E. of the 2010 Final EIR.

- Brownfield Alternative
- Mojave Desert BLM Land
- Distributed Solar Photovoltaics
- Wind Generation
- Conservation and Energy Demand Reduction

All of the alternatives continue to be infeasible. The assessment of the Distributed Solar Photovoltaics alternative has been updated in this Supplemental EIR. The discussion of the other four alternatives is summarized below.

E.3.1 Brownfield Alternative

The 2010 Final EIR considered the brownfields site alternative in order to lessen impacts on special-status wildlife species present at the Revised Project site. The 2010 Final EIR concluded that development of a brownfield site would reduce environmental impacts, especially those relating to biological resources, agricultural resources, and aesthetics. However, other environmental impacts related to use of contaminated sites would likely increase worker safety hazards. While the alternative meets two project objectives, locating the facility in a high solar resource area and minimizing environmental impacts, it only partially meets the objective to construct a large solar energy facility, and the alternative would not meet the objectives relating to funding and operational timing. Access to available transmission lines is uncertain. Solar development of a brownfield site presents regulatory challenges and liability hurdles and the feasibility of the project is uncertain. Aside from these regulatory hurdles and challenges of developing a hazardous waste site, there was no evidence in 2010 and there continues to be no evidence that the applicant owns, controls, or could feasibly acquire any brownfield sites to construct the Revised Project (see CEQA Guidelines, 14 Cal. Code of Regs 15126.6 (f)(1)). Therefore, this alternative was rejected as infeasible and not studied further in the 2010 EIR and that conclusion has not changed with the Revised Project.

E.3.2 Mojave Desert BLM Land

The BLM has received a large number of utility-scale solar energy project proposals for BLM-administered lands in California. The BLM processes solar energy right-of-way applications under its Solar Energy Development Policy (Instructional Memorandum No. 2007-097) and addresses environmental

concerns for the utility-scale energy projects on a case-by-case basis in conformance with its existing policies, manuals, and statutory and regulatory authorities. An alternative site in the Mojave Desert would be subject to environmental review under the National Environmental Policy Act. Although many solar projects have been proposed within the Mojave Desert on both private lands and federal land under the jurisdiction of the BLM, these sites do not present significant environmental advantages to the Revised Project. The impacts would affect different sensitive biological species and vistas, but would also create significant impacts.

E.3.3 Distributed Solar Photovoltaic Alternative

The description of this alternative has been updated to reflect changes to California's renewable energy industry since publication of the Final EIR in 2010.

There is no single accepted definition of "distributed" solar technology. The 2011 Integrated Energy Policy Report (IEPR) defines distributed generation resources as, "(1) fuels and technologies accepted as renewable for purposes of the Renewable Portfolio Standard (RPS); (2) sized up to 20 MW; and (3) located within the low-voltage distribution grid or supplying power directly to a consumer" (CEC, 2012a). Distributed photovoltaic (PV) technology is considered below.

A distributed solar alternative would consist of PV panels that would be installed on residential, commercial, or industrial building rooftops, or in other disturbed areas such as parking lots or disturbed areas adjacent to existing structures, such as electrical substations. Medium sized distributed solar photovoltaic plants have been built on agricultural land in the Central Valley.

Governor Brown's Clean Energy Jobs Plan also identifies the goal to install 20,000 MW of new renewable capacity by 2020, including 12,000 MW of local electricity generation from small generation sources such as distributed PV generation (CEC, 2011). In 2011, Governor Brown convened a conference with representatives of agencies, businesses, and organizations that would be involved in or affected by the 12,000 MW goal during which a series of expert-led panels identified the most critical barriers to achieving this goal and solutions to these barriers. Barriers included (Russell and Weissman, 2012):

- Grid planning is the process where utilities, federal and state grid managers, and other stakeholders consider a range of long-term energy planning issues. Participants stated that the grid planning framework is disjointed and fails to adequately consider or plan for the potential grid impacts or benefits of local renewables.
- Integration and reliability concerns were highlighted due to local renewable generation being sent to the grid through power lines and equipment that were primarily designed to transport energy in the opposite direction. Unless managed appropriately, the integration of local renewable energy can impact the safe and reliable operation of distribution grids. Integration is hindered by a lack of information about the capacities and constraints of existing distribution grids.
- Financing and procurement poses challenges for all sizes of local renewables. Some financing strategies such as the new energy metering program and California Solar initiative promote widespread development of customer-side systems but many residents and businesses are still unable to buy or lease equipment or purchase renewable energy. Federal tax incentives and procurement programs stimulated rapid development but may expire or neglect key technologies, project sizes, or locations.
- Interconnection of a proposed energy generator to the power grid functions as a source of significant uncertainty and inefficiency. If a generator meets certain criteria it can take advantage of a "fast track" process but if not, the utility conducts a series of studies to determine the impacts to the grid.

For local renewable generation, the interconnection process is critical because of the large number of interconnections that would be required. Concerns about the lack of alignment between the interconnection and procurement process were also highlighted.

- Permitting new renewable energy projects can also be challenging. Some cities and counties are pursuing renewable energy systems while others are not prepared to review or approve local renewable generation. Many cities and counties do not consider renewable energy in the planning codes and the requirements, permit fees, and local government expertise vary widely between jurisdictions, causing inefficiencies and increased costs. Local governments cited a lack of funds and time to update codes to address local renewable energy and the difficulty in keeping pace with the rapid development of local renewable technologies. Emergency responder representatives also discussed the challenge of understanding local renewables and new and emerging technologies.

The state is actively working to overcome barriers to the development of distributed renewable energy generation. In a 2011 report on renewable Energy Development in California, the California Energy Commission discussed barriers to the development of distributed generation, as well as potential solutions to overcome those barriers (CEC, 2011). The Energy Commission followed up in its 2012 Renewable Energy Action Plan, included as part of the 2012 IEPR Update, with a number of specific recommendations for actions that are necessary to develop and integrate distributed generation in California (CEC, 2012b). The Energy Commission is working with a variety of stakeholders, including the California Public Utilities Commission, the California Independent System Operator, community and environmental justice groups, and federal agency partners, to implement the recommendations in the Renewable Energy Action Plan and accelerate the development of distributed renewable energy generation in California.

Distributed solar PV is assumed to be located on already existing structures or disturbed areas so little to no new ground disturbance would be required and there would be few associated biological impacts. However, some of the larger distributed solar projects (up to 20 MW) could have similar impacts to agriculture, dust, and other resource associated with grading. Until specific sites are identified, it is difficult to determine whether and to what extent the environmental impacts of the Approved Project or Revised Project would or would not occur with the Distributed Solar Photovoltaic Alternative.

Notwithstanding, the state's efforts to promote distributed renewable energy generation, current research indicates that development of both distributed generation and utility-scale renewable energy will be needed to meet California's RPS and climate change goals, along with other energy resources and energy efficiency technologies (NREL, 2010; Linvill et al, 2011; California Office of the Governor, 2012; Zichella and Hladik, 2013). For a variety of reasons (e.g., upper limits on integrating distributed generation into the electric grid, cost, lack of electricity storage in most systems, and continued dependency of buildings on grid-supplied power), distributed energy generation alone cannot meet the goals for renewable energy development. Ultimately, both utility-scale and distributed generation renewable energy development will need to be deployed at increased levels, and the highest penetration of solar power overall will require a combination of both types (NREL, 2010). As a result, this technology is eliminated from detailed analysis as an alternative to the Proposed Project.

In addition, in order to be a viable alternative to the Revised Project, the applicant would need to own or control a sufficient amount of land or rooftop space to accommodate 247 MW of capacity. The applicant, however, does not currently own or control any other such sites or land in San Benito County or any other locations in California (see CEQA Guidelines, 14 Cal. Code of Regs 15126.6 (f)(1)). Moreover and consistent with the 2010 Final EIR's conclusion relating to this alternative, the applicant could not feasibly acquire a sufficient amount of rooftops or other land to achieve 247 MW of distributed solar

energy. Therefore, this alternative was deemed infeasible in the 2010 Final EIR and eliminated for further review and analysis.

E.3.4 Wind Generation

Wind carries kinetic energy that can be utilized to spin the blades of a wind turbine rotor and an electrical generator, which then feed alternating current (AC) into the utility grid. Modern wind turbines represent viable renewable alternatives to large solar energy projects within the region as exemplified by the major wind project areas in the Altamont Pass and Solano County. While a large wind project would not necessarily be viable at the location of the Revised Project, it would be viable at other locations throughout California. The technology is now well developed and can be used to generate significant amounts of power. Compared with 2,490 MW in 2010, there are now approximately 5,829 MW of wind being generated in California (AWEA, 2014). While wind electricity generation is a viable and important renewable technology, it is not technologically feasible at the Revised Project site due to the lack of wind resources. Additionally, a wind facility would not reduce the large scale ground disturbance and visual impacts so would not substantially reduce impacts associated with the Revised Project. Therefore, wind generation was eliminated from further consideration in the 2010 Final EIR and continues to be infeasible.

E.3.5 Conservation and Energy Demand Reduction

Conservation and demand reduction consist of a variety of approaches for the reduction of electricity use, including energy efficiency and conservation, building and appliance standards, and load management and fuel substitution. In 2005 the Energy Commission and CPUC's Energy Action Plan II declared cost effective energy efficiency as the resource of first choice for meeting California's energy needs. The Energy Commission noted that energy efficiency helped flatten the state's per capita electricity use and saved consumers more than $56 billion since 1978 (CPUC, 2008). The investor-owned utilities' 2006-2008 efficiency portfolio marks the single-largest energy efficiency campaign in U.S. history, with a $2 billion investment by California's energy ratepayers (CPUC, 2008). However, with population growth, increasing demand for energy, and the need to reduce greenhouse gases, there is a greater need for energy efficiency. Additionally, San Benito County is in the process of updating its General Plan with health and sustainability principles that highlight the efficient use of resources including energy consumption (County, 2013).

The CPUC, with support from the Governor's Office, the Energy Commission, and the California Air Resources Board, among others, adopted the California Long-Term Energy Efficiency Strategy Plan for 2009 to 2020 in September 2008 and updated in 2011 (CPUC, 2008; CPUC, 2011). The plan is a framework for all sectors in California including industry, agriculture, large and small businesses, and households. Major goals of the plan include:

- All new residential construction will be zero net energy by 2020;
- All new commercial construction will be zero net energy by 2030;
- Heating, ventilation, and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the Low Income Energy Efficiency program by 2020.

This alternative is not technically feasible as a replacement for the Proposed Project, because California utilities are required to achieve aggressive energy efficiency goals laid out by the CPUC in 2004

(D.04-09-060), with the aim of exceeding the maximum achievable potential energy savings defined at that time. Additional energy efficiency beyond that occurring in the baseline condition may be technically possible, but it is speculative to assume such a level of energy efficiency is achievable. With population growth and increasing demand for energy, conservation and demand-management alone is not sufficient to address all of California's energy needs. Additionally, as stated in the California Energy Commission *2009 Integrated Energy Policy Report*, California's renewable energy goals are based on a percentage of retail sales of electricity, and reducing overall electricity demands means fewer retail sales and therefore less renewable energy that must be generated. Furthermore, it states that conservation and demand-side management means fewer renewable plants will need to be built. However, conservation and demand-side management would not itself provide the renewable energy required to meet the California renewable energy goals. Therefore, it would not meet project objectives pertaining to the renewable energy goals and renewable technologies, like solar PV generation, would be required.

E.4 Comparison of Alternatives

Table E-1 presents the summary comparison of the Revised Project and these alternatives. The impacts of the Revised Project, as defined in Section C of this SEIR, remain consistent with the conclusions presented in Table E-1 for Alternative A Revised.

Table E-1. Comparison of Alternatives to the Revised Project

	Impact Severity: Revised Project Compared to 2010 Alternatives				
Environmental Resource	Revised Project	Alternative A Revised (Approved Project)	Alternative B Revised	Alternative C Revised	Westlands CREZ Alternative
Aesthetics: Long-term visibility of construction and night-lighting	Significant, unavoidable	Significant, unavoidable and slightly more severe	Less than significant with mitigation	Less than significant with mitigation	Likely less than significant with mitigation
Aesthetics: Introduction of structure contrast, developed character, view blockage, and glare	Significant, unavoidable	Significant, unavoidable and slightly more severe	Less severe, but significant, unavoidable	Less severe, but significant, unavoidable	Less severe, but likely significant, unavoidable
Biological resources: Loss of habitat and take of blunt-nosed leopard lizard	Less than Significant, with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
Biological resources: Loss of habitat and take of giant kangaroo rat	Less than Significant, with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
Biological resources: Loss of habitat and take of San Joaquin kit fox	Less than Significant, with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
Biological resources: Cumulative effects	Less than Significant, with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
Noise: Construction noise would substantially disturb sensitive receptors	Significant, unavoidable	Significant, unavoidable	Less severe, but significant, unavoidable	Less severe, but significant, unavoidable	Significant, unavoidable or less than significant, depending on location
Noise: Construction noise would violate a local ordinance	Significant, unavoidable	Significant, unavoidable	Less severe, but significant, unavoidable	Less severe, but significant, unavoidable	

E.4.1 Environmentally Superior Alternative

As presented in the 2010 FEIR, Alternative C Revised was identified as the environmentally superior alternative due to its less severe significant environmental impacts relating to Aesthetics, Biological Resources, and Noise. This conclusion would remain the same with respect to the Revised Project.

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Figure E-1. Alternative A Revised

Figure E-2. Alternative B Revised

Figure E-3. Alternative C Revised

Figure E-4. Westlands CREZ Alternative