

5.0 Alternatives Analysis

5.1 Introduction

Section 15126.6(a) of the State California Environmental Quality Act (CEQA) Guidelines states that an Environmental Impact Report (EIR) “shall describe a range of reasonable alternatives to the project, or to the location of 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.” The feasibility of project alternatives must be based on specific economic, social, legal, and technical considerations.

The basic objectives of the Lompoc Wind Energy Project (Project) (see Section 1.3, Project Objectives) include developing an economically viable wind energy project in Santa Barbara County (County) to generate and deliver 80 to 120 megawatts (MW) of renewable energy to the Pacific Gas and Electric Company (PG&E) power grid, helping PG&E meet its Renewable Energy Portfolio requirements. The Project needs to support commercially available financing and provide Project property owners with a stable, secondary source of income to supplement income from ranching and farming operations in order to support ranch maintenance and improvements. The Project also needs to begin operating in time to meet milestones of an existing power purchase agreement and to qualify for certain tax credits.

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 that are infeasible. The CEQA Guidelines state that factors that may be considered when determining the feasibility of alternatives are “site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent)” [CEQA Guidelines §15126.6(f)(1)].

Additionally, the No Project Alternative must be analyzed. The EIR must explain the rationale for selecting the alternatives to be discussed, identify those that were not carried forward because they were infeasible, and briefly explain why they were not carried forward. The “environmentally superior” alternative to the Project must be identified and discussed. If the environmentally superior alternative is the No Project Alternative, the EIR must identify an additional “environmentally superior” choice among the other project alternatives.

The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. Section 15126.6(a) of the CEQA Guidelines also states that “there is no ironclad rule governing the nature or

scope of the alternatives to be discussed other than the rule of reason” (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553 and *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376).

The analysis in this EIR complies with CEQA requirements. The purpose of this alternatives section is to provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Project. One major tenet of the State CEQA Statutes and Guidelines (and the County Local Guidelines for Implementation of CEQA) is to provide more meaningful public disclosure and participation in the review of public and private projects. Although most alternatives are not evaluated at a project level of detail, sufficient information is provided to assess the relative merits of the alternatives. As described below, one power line alternative is evaluated at a project level of detail that is adequate to support permits and approvals. If the County were to select another alternative at some point, that alternative also would need to be evaluated at a project level of detail.

5.2 Alternatives Considered But Not Carried Forward

This section describes the alternatives that were considered but not carried forward and the reasons for their elimination from further consideration. They include alternative site locations for the Lompoc Wind Energy Facility (LWEF), which is the wind turbine generator (WTG) component of the Project, and alternative routes for the 115-kilovolt (kV) power line.

5.2.1 Alternative Site Locations

The use of alternative site locations was considered but not carried forward for detailed analysis. Four potential areas, in addition to the Project area, have been identified by the Santa Barbara Community Environmental Council (CEC, 2006) as promising wind resource regions. The four areas identified are a subset of areas that have potential wind resources, excluding areas that would be difficult or infeasible to develop for wind energy, based on a number of practical constraints (such as lack of road access, mountainous terrain, or incompatible land use). The four areas are:

1. Zaca Lake Region, which consists of over 25 miles of ridge crest approximately 10 miles northeast of Los Olivos and Santa Ynez near Zaca Lake
2. The Channel Islands of Santa Cruz, San Miguel, and Santa Rosa
3. Offshore areas near Vandenberg Air Force Base (VAFB)
4. The Hollister Ranch Region, consisting of the hill crests north of the Hollister Ranch

Other areas with potential for wind development also exist in the County. However, based on the 2006 CEC study, such areas either have major constraints or impediments to development (for example, VAFB and national forest areas) or are smaller and have less wind energy potential. County staff are aware of wind industry interest in two such areas, one in the Casmalia Hills area and one in the general vicinity of the proposed Project. For either of these sites, several years of meteorological studies would be needed to establish feasibility of a commercial wind farm. As such studies have not yet begun, potential wind energy development in these areas is speculative, but not unlikely.

The four potential alternative Project sites were not carried forward for detailed analysis because they were not considered feasible; it is unlikely they would avoid or substantially reduce environmental impacts compared to the Project location, and they fail to satisfy the Project objectives for reasons summarized in the following section.

5.2.1.1 Alternative Sites Are Not Feasible

Site Suitability

It would take several years to perform the necessary technical studies (meteorological and biological studies in particular) to assure the suitability of the alternative sites. This is especially true for offshore and island locations that could require extensive oceanographic surveys. Thus, development of these areas would not meet the objective of having the wind project operating in time to meet milestones of an existing power purchase agreement and qualifying for certain tax credits. In addition, it would fail to meet the public objective of having renewable power available by 2010.

Lack of Infrastructure

Major infrastructure components (such as subsea cables) are lacking for the development of offshore and island locations. Lengthy studies would be needed to assure technical feasibility of these components, and substantial additional costs would be required to develop them. Thus, development of these areas would not meet the Project objectives of being economically viable, having the wind project operating in time to meet milestones of an existing power purchase agreement, and being able to qualify for certain tax credits. Additionally, it would fail to meet the public objective of having renewable power available by 2010.

Consistency with the General Plan, Regulatory Limitations, and Jurisdictional Boundaries

The offshore and island alternatives would be subject to regulations of the California Coastal Commission, State Lands Commission, and other state and federal agencies. Development of wind power at these locations would likely generate greater controversy than the Project site, and agency approval of these facilities is more uncertain. The Hollister Ranch location and other locations in the County's Coastal Zone are currently infeasible, because there is no County ordinance enabling wind energy projects in the Coastal Zone. Thus, development in these areas would fail to meet the objective of meeting regional energy needs in an efficient, sustainable, and environmentally sound manner, as provided in the Energy Element of the County Comprehensive Plan.

Ability to Obtain Site Control

Lease agreements would need to be developed with the property owners or agencies with jurisdiction over the various alternative sites. Since the land is not currently on the market, the ability to obtain site control is speculative. Thus, even if site control could be obtained, development of these areas would not meet the objective of having the wind project operating in time to meet milestones of an existing power purchase agreement and being able to qualify for certain tax credits. In addition, it would fail to meet the public objective of having renewable power available by 2010.

Economic Viability

As a result of the factors and uncertainties outlined, use of an alternative site would be financially infeasible at this time.

5.2.1.2 Alternative Sites Would Not Avoid or Substantially Reduce Environmental Impacts

Development of a wind energy facility at these sites would not necessarily reduce the significant environmental impacts of the proposed Project. Impacts would depend on the precise location of the wind farm and whether it was located onshore or offshore, but potentially affected resources include:

- ***Aesthetic/Visual Resources*** – The Zaca Lake area is considered to be visually sensitive, and a wind project located there could be visible from Los Olivos and throughout the Lompoc Valley. A project located on the Channel Islands might be visible from the main land on clear days and from public areas on the islands. WTGs located offshore from VAFB could be visible from County beaches. Potential WTG locations on Hollister Ranch within the Coastal Zone might not be in public view, but are currently infeasible due to the lack of an enabling ordinance. Locations on the ridge above Hollister Ranch outside the Coastal Zone would likely be visible from the State Route 1 (SR-1) Scenic Highway Corridor.
- ***Terrestrial and Marine Biological Resources*** – Biological impacts from construction and avian and bat mortality from Project operation would not necessarily be reduced by siting the wind energy facility in a different location. The offshore and Hollister Ranch locations may increase the potential for impacts to seabirds and shorebirds. Zaca Lake also is known to be home to a wide variety of bird species, including golden eagle, bald eagle, great blue heron, peregrine falcon, kestrel, harrier, hawk, and owl, among others. Additional biological impacts could occur, depending on the location of specific facilities. The Channel Islands, in particular, are known to contain a number of sensitive plant and wildlife species. The offshore locations would also cause potentially adverse impacts to marine biology and habitats, including rocky substrate.
- ***Archaeological and Paleontological Resources*** – All of the terrestrial sites could contain significant resources; the Channel Islands, in particular, are known to be highly sensitive to cultural and paleontological resources.
- ***Land Use and Planning*** – A wind energy facility may not be considered an acceptable use at the Channel Islands, which are part of a National Park (except for the western part of the Santa Cruz Island, which is owned by the Nature Conservancy), nor with the Marine Sanctuary designation of the waters that extend for 6 miles around the islands. Land use and planning issues associated with the Channel Islands and the other sites would have to be identified once specific sites were determined.

Additionally, impacts to transportation, air quality; risk of accidents/hazardous materials/safety; and water resources could occur from development at all of the sites, and impacts to fire protection as well as geology and soils could occur at all sites except the offshore alternative. None of the sites are located near a population center, but some noise-sensitive receptors could be present sufficiently close to be affected by construction and WTG operations.

5.2.1.3 Alternative Sites Would Fail to Satisfy Project Objectives

Because of the uncertainties surrounding a wind energy facility at the alternative sites and the delays that would be created by the need to ensure General Plan consistency; obtain

support from other state and federal jurisdictions; prepare additional environmental studies; collect meteorological data; and obtain site control (assuming site control can be obtained), the following Project objectives may not be met:

- To develop an economically viable wind energy facility that will support commercially available financing
- To help PG&E meet its Renewable Energy Portfolio requirements by adding significantly to its portfolio of wind-generated power
- To begin operating the wind energy facility in time to meet milestones of an existing power purchase agreement and to qualify for certain tax credits
- To meet regional energy needs in an efficient, sustainable, and environmentally sound manner, as provided in the Energy Element of the County Comprehensive Plan, which encourages use of alternative energy for environmental and economic benefits and encourages opportunities for businesses that develop or market alternative energy technologies
- To assist California in meeting its legislated Renewable Energy Portfolio standards for the generation of renewable energy in the state, which require investor-owned utilities to purchase 20 percent of their power from renewable sources by the year 2010
- To promote the long-term economic viability of agricultural uses in the County, including grazing and dry land farming, by developing an agriculturally compatible land use to supplement income from traditional agricultural activities

Thus, locating the Project at one of these alternative sites would not meet the CEQA requirements that an alternative site be reasonable, feasibly attain most of the basic objectives of the project, and avoid or substantially lessen any of the significant effects of the project.

5.2.2 Alternative Power Line Routes

Alternative power line routes were considered by PG&E but eliminated due to a variety of technical and environmental factors.

5.2.2.1 Power Line Route Alternative A (Parallel Power Line Route to Existing Celite Line)

This alternative was discussed and rejected in a Facilities Study conducted by PG&E for the Applicant (PG&E, 2003). This approximately 8.3-mile route, shown on Figure 5.2-1, would extend from the Alternative Project Substation, located at the northern end of the “Middle” turbine corridor, as shown on Figure 2-2, southerly and easterly for approximately 1.6 miles before turning northerly for approximately 1.5 miles to San Miguelito Road. Here the corridor would follow the road toward the City of Lompoc for approximately 0.7 miles before leaving the road to avoid Miguelito County Park. The corridor would continue cross-county in a generally northern direction for approximately 1.5 miles until reaching the existing Manville Tap line near the Celite substation. A new parallel line would then be constructed adjacent to the Manville Tap line to avoid a long electricity delivery curtailment for Celite. The parallel line would run for a distance of approximately 3 miles. This

alternative could include removing the existing Manville Tap to Celite and providing a new service tap.

This alternative would run along the peaks of Miguelito Canyon and would require very long spans to make the necessary crossings from ridge to ridge. This may be technically feasible, but access to structures for construction and maintenance would be very difficult. Soil disturbance would create significant erosion issues because of soils characteristics in the area and could cause the power poles to be unstable. Steel towers could be required instead of wood or light duty steel poles to protect the facilities from high winds, which would increase impacts to aesthetics/visual resources. Additionally, the height of the towers in relation to the surrounding areas could subject them to increased lightning strikes. The new line construction north of the Celite substation could be made on light-duty steel poles, but the terrain is very steep, and new road construction would be required, which would increase the potential for environmental impacts. Furthermore, PG&E has stated that they will not construct or operate additional power lines in this area due to the difficulty in accessing this steep terrain during construction, operation, and maintenance. The last 1.3 miles of the route would be highly visible from the City of Lompoc, raising concerns about visual impacts. This alternative power line route was therefore not carried forward.

5.2.2.2 Power Line Route Alternative B (Route Adjacent to San Miguelito Road and Cross Over Existing Celite Line)

This alternative was discussed and rejected in a Facilities Study conducted by PG&E for the Applicant (PG&E, 2003). This approximately 7.9-mile route, shown on Figure 5.2-1, would begin at the Alternative Project Substation and proceed southeasterly for approximately 1,500 feet until reaching the existing PG&E 12-kV wood pole at San Miguelito Road. The new power line would then co-locate with the existing 12-kV line southwesterly for approximately 2,400 feet, and then turn northeasterly for approximately 10,400 feet. At this point, the co-located line would turn southeasterly for approximately 2,000 feet, crossing San Miguelito Road, then turn northeasterly and run about 4,300 feet. From there it would turn almost due east for about 500 feet to San Miguelito Road. The line would be close to residences in this area. The combined line then would turn northerly along San Miguelito Road for about 6,500 feet. The power line would then leave the road and continue northeasterly cross-county through the Celite property. About 6,000 feet from the road, it would cross the existing Manville Tap serving Celite. After crossing the tap line, the new power line would continue northeast for another 5,000 feet. Here the new line would turn northerly along the west side of SR-1 for about 0.5 miles. The new line would cross over a small hill, span SR-1, and tie into the Celite line on the east side of SR-1, just inside the Lompoc city limit.

This alternative would take advantage of the existing corridor created by the 12-kV distribution system, which runs adjacent to San Miguelito Road; but it would require crossing steep terrain with limited access and would require the removal of a substantial amount of vegetation for construction and maintenance. Access along San Miguelito Road would be good, but the power line would run very close to Miguelito County Park and private single-family residences adjacent to San Miguelito Road. Rebuilding this line could cause power outages for existing customers, including a tracking station at VAFB, and it may require significantly taller poles to maintain the required separation between the

distribution and power line conductors. This alternative power line route was therefore not carried forward.

5.2.2.3 Power Line Route Alternative C (Northerly Route)

This alternative was considered in the PG&E Facilities Study (PG&E, 2003). This is the route originally proposed in the Project application, but it was superseded by a Project application amendment in November 2006.

The alternative route would run approximately 2 miles northward from the Project Substation through the LWEF area, as shown on Figure 5.2-1, turn toward the southeast and then northeast over agricultural properties to San Miguelito Road at a point approximately 0.5 miles northeast of Miguelito County Park. From there, the line would be as described for the Project. Two optional substation locations for the start of this route within the LWEF could be used if this route were developed.

This route was eliminated from further consideration because it would not reduce significant Project impacts; rather, it would result in greater impacts because it traverses areas with steeper terrain and more undisturbed vegetation than the proposed power line route. This alternative power line route was therefore not carried forward.

5.2.2.4 Power Line Route Alternative D (Relocation of Celite Line)

This alternative is among those described in a project amendment for alternative power line routes submitted by the Applicant in March 2007. This route is shown on Figure 5.2-2.

This alternative would use the same route as the proposed power line from the Project Substation to angle point 22 of the proposed power line route. The existing Celite line between poles Q and P would be connected to the alternative power line at angle point 22 with a disconnecting switch. The combined power line would follow the proposed power line route between angle points 22 and 27 and connect to the existing Celite line (Manville Tap) at pole K. This pole would likely be replaced to accommodate the connection. This would allow the removal of that portion of the existing Celite line (and poles) from pole P to pole K.

Removal of that portion of the existing Celite line from pole P to pole K would interfere with the electric service arrangements between PG&E and Celite under CPUC-approved PG&E Electric Rule 16. Under this rule, PG&E is obligated to serve Celite and provide those facilities (electric lines) required for that service. Such facilities become part of the PG&E rate base with the associated costs recovered through CPUC-approved electric rates borne by all PG&E ratepayers. In contrast, under the Project, the Applicant pays all costs associated with the installation and PG&E ownership of the power line with no added burden to the PG&E ratepayers.

Because the Celite line relocation would be done as part of the Project, the construction costs would be borne by the Applicant, significantly increasing project costs. Furthermore, PG&E has stated that the increased weight of the combined power line might require steel poles and larger foundations than the Project power line alone, potentially increasing impacts. Due to the increased project costs and PG&E's technical reservations about combining the lines, this alternative power line route was not carried forward.

A variation to this alternative would be to connect the existing Celite line to the proposed power line along San Miguelito Road at the entrance to the Celite Mine headquarters. However, this would increase the issues discussed above.

5.2.2.5 Power Line Route Alternative E (Adjacent to SR-1)

This alternative is among those described in a project amendment for alternative power line routes submitted by the Applicant in March 2007. This route was suggested by PG&E engineers, as it offers advantages for power line construction and maintenance. This route is shown on Figure 5.2-3.

This alternative would follow the Project power line corridor up to angle point 26. At that point, it would follow a northerly route along the base of the hill, to angle point 27A, located near the Celite Employee's Club and Stables just west of SR-1. The line would extend from angle point 27A, directly across the highway to angle point 27B located approximately 456 feet to the east. From angle point 27B, the power line would run north for approximately 1,490 feet, following SR-1 to angle point 28A. From this point, it would turn northwest for approximately 1,030 feet while still following the highway, connecting to the existing Celite line at pole I located in the City of Lompoc. This pole would be replaced with a tubular steel pole, and the existing pole switch at pole F would be removed.

This route would run immediately alongside SR-1 for approximately 1/2 mile, creating significant visual impacts that would exceed those of the proposed project. Therefore, the alternative was dismissed.

A variant on this alternative consists of undergrounding the portion of the line between angle point 26 and the tie-in at pole I. This alternative would eliminate most visual impacts along SR-1. However, the route unavoidably passes through 3 known archeological sites. This alternative was dismissed based on its potential for impacts to cultural resources, coupled with the fact that Power Line Alternative 1, as mitigated, was determined to have less than significant visual impacts (Section 5.3.2.2).

5.2.2.6 Power Line Route Alternative F (Parallel to Celite Line)

This alternative is among those described in a project amendment for alternative power line routes submitted by the Applicant in March 2007. This route is shown on Figure 5.2-4.

The power line would be constructed on an adjacent and parallel right of way to the existing Celite line. The power line would be routed from the Project substation to angle point 22 as under the Project. At this point, it would turn north and parallel the existing Celite line until pole K, where a tubular steel pole would be installed in place of pole K. Interconnection to the PG&E facilities would occur as described under Alternative D above. Because of the terrain, larger and more substantial steel structures would be required to carry the heavier conductor weight in order to traverse the long spans over the canyons.

A variation to this alternative would be to combine the Celite line and the alternative power line on the same right of way beginning at angle point 22 to existing pole K, creating one single line. This would require the construction of this line segment with even larger and more substantial structures in order to carry the combined requirements of the both the generating facility and the Celite facility. Upon completion of construction and after all

electrical connections were made, the existing Celite line from pole P to pole K would be removed.

This alternative is very similar to Alternative A, discussed above, from angle point 22 to Lompoc. The potential impacts are similar, including construction-related impacts and visual impacts to the City of Lompoc. Therefore, for the same reasons as Alternative A, this alternative was not carried forward.

5.2.2.7 Power Line Route Alternative G (Undergrounding on West Side of SR-1)

This alternative alignment is the same as Power Line Alternative 1 (Section 5.3.2.1) proposed by the Applicant, except that the portion of the line between angle point 26 and pole K would be placed underground to reduce the visual impacts of the poles and overhead lines visible from SR-1. Undergrounding the high-voltage lines would be technically difficult due to the steep slopes, and would likely necessitate significant amounts of terrain modification and benching on the hillside to accommodate the straight stretches required for conductor installation and operation. This alternative would create potentially significant biological and geological impacts from the clearing and grading and also significant visual impacts to the hillside along SR-1 outside of Lompoc from terrain modification and grading scars.

This alternative was dismissed based on its potential for these impacts, coupled with the fact that Power Line Alternative 1, as mitigated, was determined to have less than significant visual impacts (Section 5.3.2.2).

5.3 Alternatives Carried Forward for Further Analysis

This section describes those alternatives that were carried forward for detailed analysis and compares their impacts with those of the Project. The alternatives analysis includes both LWEF alternatives (Section 5.3.1) and a power line route alternative (Section 5.3.2). The LWEF includes the WTGs, access roads, communication system, meteorological tower, operations and maintenance (O&M) facility, onsite electrical collection and distribution lines, and Project Substation. Section 5.4 includes a qualitative comparison of environmental impacts associated with each alternative as compared to the Project. This section also identifies the environmentally superior alternative.

5.3.1 LWEF Alternatives

5.3.1.1 LWEF Alternative 1 (Limit WTGs on South/West Corridors)

Description of LWEF Alternative 1

This alternative would be implemented on the same site as the Project, and Project construction practices and regulatory requirements would be unchanged. Project components would be unchanged as well, with one exception – the number of WTGs would be reduced, or WTGs would be microsited in portions of the LWEF, or both, in order to reduce significant and otherwise unavoidable impacts to views from Jalama Beach County Park. As shown on Figure 5.3-1, this project alternative could prohibit the installation of up to 13 WTGs along the southwestern border of the LWEF; however, it is expected that the Applicant would be able to demonstrate through performance measures that the installation of fewer WTGs could be prohibited as long as no portions of the tower or nacelle would be

visible above the ridgeline from Jalama Beach County Park. (Only the tops of the WTG blades would be allowed to be visible.)

Comparative Impacts

Aesthetics/Visual Resources

Most impacts from construction would be as described for the Project because most of the same components would be constructed in the same locations; however, the impacts in the western portion of the LWEF site would be reduced because fewer WTGs would be constructed. Operations impacts would be the same as the Project with one exception—this alternative would either avoid the impacts to views from Jalama Beach County Park, including impacts from night lighting, that would occur under the Project (if no portions of the WTGs were showing), or it would reduce these Project impacts to adverse, but less than significant (*Class III*) (if only the tops of the blades were visible).

Agricultural Resources

The same types of impacts would occur as under the Project, although slightly less grazing land would be affected, because fewer WTGs would be constructed. The LWEF would continue to be a permitted use on the agriculturally zoned site with a Conditional Use Permit (CUP); grazing would be able to continue; and agricultural productivity would not be impaired. Some reduction in beneficial impacts would occur because financial support provided to property owners is based upon the gross revenue from electrical generation. Also, property owners would have greater access to agricultural lands than without the Project, but somewhat reduced as compared to the Project as proposed.

Air Quality

During construction, the same types of emissions would occur as with the Project (nitrogen oxides [NO_x], reactive organic compounds [ROC], and particulate matter), although they would be slightly reduced because fewer WTGs, and most likely some of the access roads, would be constructed. Emissions from operations would be essentially the same as under the Project because the same number of personnel would be required and travel requirements would be comparable. The significance of impacts would remain unchanged. In addition this alternative, like the Project, would support state legislation related to the reduction of greenhouse gas (GHG) emissions.

Biological Resources

Construction impacts to biological resources, such as vegetation, wildlife, nesting birds, and special-status species, would be similar to those occurring under the Project. Very little of the precluded area supports Gaviota tarplant, so impacts to that species would not be reduced. However, impacts to other plants and wildlife would be slightly reduced because fewer WTGs, and most likely fewer access roads, would be constructed. The significance of impacts would be unchanged. Operational impacts would be similar to those of the Project; the impact to birds and bats from potential collisions with WTGs may be slightly reduced due to the smaller number of WTGs, but would remain significant and unavoidable because a substantial number of WTGs would still be constructed.

Cultural Resources

Impacts to cultural resources would be comparable to those that would occur under the Project. No cultural resources have been identified in the area where the number of WTGs would be reduced; therefore, this does not lessen the potential for impacts. The potential for unanticipated discoveries of cultural resources would not be appreciably lessened under this alternative, nor would the potential for unauthorized collection. The significance of impacts would remain unchanged.

Energy/Electric Utilities

It is likely that less electricity could be generated by this alternative as by the Project. Although adjustments to WTG siting or the installation of larger WTGs could partially compensate for the precluded WTG locations, the southern Project boundary is the richest wind resource available to the Project, based upon statements made by the Applicant. This alternative, like the Project, would result in a beneficial impact to energy by supporting the United States Department of Energy wind energy goals and California Renewable Portfolio Standard (RPS) goals. However, the benefit would likely be less than for the Project, as proposed.

Like the Project, construction and operation of this alternative would result in the consumption of nonrenewable energy resources; although, due to the reduced number of WTGs in this alternative, construction-related consumption of nonrenewable energy resources would be less than for the Project. Consumption during operations would not differ substantively from the Project. The significance of impacts would remain unchanged.

Fire Protection and Emergency Services

Impacts would be comparable to those described for the Project. A similar risk of increased fire from constructing and operating a wind energy facility in an Extreme Fire Hazard Area would occur, and the same fire prevention and fire suppression measures would be implemented. The potential impacts to the implementation of controlled burns would be similar, as well. The significance of impacts would remain unchanged.

Geology/Soils

Construction would occur in the same areas as under the Project using the same methods, and therefore, would result in the same types of impacts associated with fault rupture, ground shaking and liquefaction, landslides, soil erosion, sewage effluent disposal, compressible and collapsible soil, and subsidence. Because this alternative would result in fewer WTGs, less grading and soil surface disturbance would be required, but geotechnical studies and a grading and drainage plan would be required, as with the Project, and overall, impacts would be similar.

Land Use

Land use impacts under this alternative would be similar to those of the Project. The alternative would comply with the Land Use & Development Code (LUDC), as well as Federal Aviation Administration (FAA) and VAFB operational requirements. It would result in similar quality of life impacts associated with traffic and noise, although they would be slightly reduced due to the fewer number of WTGs that would be built. The

significance of impacts would be unchanged. This alternative also would be consistent with all applicable plans and policies.

Noise

Noise impacts from construction would be similar to those of the Project, although reducing the number of WTGs would result in lessened traffic noise impacts, because fewer truck trips would occur. The significance of impacts would remain unchanged. Noise impacts during operations would be similar to those described for the Project. No noise-sensitive receptors are present in the area that would experience a reduction in WTGs; therefore, noise impacts would not be reduced.

Paleontological Resources

Like the Project, this alternative would result in construction in an area that is of moderate to high paleontological sensitivity, and there is a potential for impacts to significant paleontological resources, including unauthorized collection. Construction of fewer WTGs may result in a reduced potential for paleontological resource impacts, but it would not be appreciably different than under the Project; and the significance of impacts would be unchanged.

Risk of Accidents/Hazardous Materials/Safety

Potential risks associated with construction and operation of the LWEF would be as described for the Project. No areas open to the public are in the vicinity of the corridor where the WTG reduction would occur; and safety impacts associated with turbine failure, blade throw, blade icing, worker safety, and the accidental release of hazardous materials would be unchanged.

Transportation/Circulation

Approximately 1,256 fewer truck trips would be required during construction than under the Project because the parts and water required would be reduced by up to 13 WTGs. This would result in a reduction in impacts associated with roadway congestion, roadway safety, road blockages and traffic delays, and road damage, although the level of impact significance would not change. Operational impacts would be similar to those of the Project.

Water Resources

Construction would occur in the same areas as under the Project using the same methods; therefore, construction activities would result in the same types of impacts associated with erosion and sedimentation from construction activities, as well as the same types of impacts to water quality from small fuel or oil spills, concrete, and trash and litter during construction. Changes to stormwater runoff, flooding, and hydrologic conditions would be similar, as would the removal or reduction of vegetation from the buffer zone of streams, creeks, or wetlands. Impacts could be somewhat reduced because less construction would be needed, but the significance of impacts would be unchanged. Operational impacts, including impacts to groundwater, would be as described for the Project.

Other Issue Areas

Impacts to other issue areas (recreation, mineral resources, utilities/service systems, and population/housing) would be as described for the Project.

5.3.1.2 Alternative 2 (Phase I Only)

Description of Alternative 2

This alternative would limit the Project to the portion that would be completed under Phase I and would include the construction and production of 82.5 MW of wind energy, which would fulfill the existing Power Purchase Agreement between the Applicant and PG&E. Additionally, this alternative would eliminate those WTGs that are visible from Jalama Beach County Park consistent with the analysis for the LWEF Alternative 1 above. The 115-kV power line, meteorological towers, Project Substation, and O&M facility would be built during this phase. It is expected that construction would be maximized to the extent feasible in those corridors with the most favorable meteorological conditions, and therefore, fewer access roads are expected to be required because construction in some corridors would not occur. Based upon the WTG models proposed by the Applicant, which range from 1.5 MW to 3.0 MW, this alternative would allow the construction and operation of between 28 to 55 WTGs. Until the type of wind WTG is selected, wind regime analysis finalized, and a contractor selected, the Applicant cannot be specific as to which portions of the Project would be developed first with the exception of these components. Construction of subsequent phases is not part of this alternative.

Comparative Impacts

Aesthetics/Visual Resources

The same general types of impacts would occur as under the Project, although they would be lessened because fewer turbines and access roads would be constructed. Because the WTGs in the South and West Corridors (Figure 2-2) visible from Jalama Beach County Park would not be built, the impact to views would be avoided or reduced to less than significant, as described under LWEF Alternative 1. This alternative would therefore lessen the visual impacts resulting from the Project.

Agricultural Resources

The same types of impacts would occur as under the Project, although less grazing land would be affected because fewer WTGs and roads would be constructed. The LWEF would continue to be a permitted use on the agriculturally zoned site with a CUP; grazing would be able to continue; and agricultural productivity would not be impaired. Some reduction in the beneficial impacts would occur because financial support is based on the gross revenue from electrical generation. Also property owners would have greater access to agricultural lands, although fewer access roads would be constructed, than without the Project, but somewhat reduced as compared to the Project as proposed.

Air Quality

During construction, the same types of emissions would occur as with the Project (NO_x, ROC, and particulate matter), although they would be reduced because fewer WTGs and roads would be constructed. Emissions would occur during one construction period.

Emissions from operations would be essentially the same as under the Project, because the same number of personnel would be required and travel requirements would be comparable. The significance of impacts would remain unchanged. In addition, this alternative, like the Project, would support state legislation related to the reduction of GHG emissions, although less renewable power would be generated.

Biological Resources

Construction impacts to biological resources, such as vegetation, wildlife, nesting birds, and special-status species, would be similar to those occurring under the Project, but would be reduced because fewer WTGs would be constructed. The significance of impacts would be unchanged. Operational impacts would be similar to those of the Project; the impact to birds and bats from potential collisions with WTGs may be reduced due to the smaller number of WTGs, but would remain significant and unavoidable because a substantial number of WTGs could still be constructed.

Cultural Resources

Impacts to cultural resources would be comparable to those that would occur under the Project. The potential for unanticipated discoveries of cultural resources would not be appreciably lessened under this alternative, nor would the potential for unauthorized collection. The significance of impacts would remain unchanged.

Energy/Electric Utilities

Less energy would be generated by this alternative than under the Project (82.5 MW as opposed to up to 120 MW). This alternative, like the Project, would result in a beneficial impact to energy by supporting the United States Department of Energy wind energy goals and California RPS goals, but the benefit would be reduced.

Like the Project, construction and operation of this alternative would result in the consumption of nonrenewable energy resources, although due to the reduced number of WTGs in this alternative, construction-related consumption of nonrenewable energy resources would be less for than the Project. Consumption during operations would not differ substantively from the Project. The significance of impacts would remain unchanged.

Fire Protection and Emergency Services

The same types of risks would occur as described for the Project. A similar risk of increased fire from constructing and operating a wind energy facility in an Extreme Fire Hazard Area would occur, and the same fire prevention and fire suppression measures would be implemented. The potential impacts to the implementation of controlled burns would be similar, as well. The significance of impacts would remain unchanged, but risks from construction would only occur during one construction period.

Geology/Soils

Construction would occur in the same areas using the same methods as under the Project, and therefore would result in the same types of impacts associated with fault rupture, ground shaking and liquefaction, landslides, soil erosion, sewage effluent disposal, compressible and collapsible soil, and subsidence. Since this alternative would result in fewer WTGs and roads, less grading and soil surface disturbance would be required; but

geotechnical studies and a grading and drainage plan would be required, as with the Project, and overall, impacts would be similar.

Land Use

Land use impacts under this alternative would be similar to those of the Project. The alternative would comply with the LUDC, as well as FAA and VAFB operational requirements. It would result in similar quality of life impacts associated with traffic and noise, although they would be reduced because fewer WTGs and roads would be built and impacts would occur only during one construction phase. The significance of impacts would be unchanged. This alternative also would be consistent with all applicable plans and policies.

Noise

Noise impacts from construction would be similar to those of the Project, although reducing the number of WTGs and roads would result in lessened traffic noise impacts because fewer truck trips would occur; moreover, noise would be generated only during one construction period. The significance of impacts would remain unchanged. Noise impacts during operations would be similar to those described for the Project, albeit in fewer locations. The number of WTGs that would be constructed would be reduced, but it is not known where they would be placed.

Paleontological Resources

Like the Project, this alternative would result in construction in an area that is of moderate to high paleontological sensitivity, and there is a potential for impacts to significant paleontological resources, including unauthorized collection. Construction of fewer WTGs may result in a reduced potential for paleontological resource impacts, but the potential would not be appreciably different than under the Project; and the significance of impacts would be unchanged.

Risk of Accidents/Hazardous Materials/Safety

Potential risks associated with construction and operation of the LWEF would be as described for the Project. Safety impacts associated with turbine failure, blade throw, blade icing, worker safety, and the accidental release of hazardous materials would be unchanged.

Transportation/Circulation

Up to 2,415 fewer truck trips would be required during construction than under the Project, because parts and water for a maximum of 55 WTGs would be needed. Truck trips could be further reduced if not all access roads were built. This would result in a reduction in impacts associated with roadway congestion, roadway safety, road blockages and traffic delays, and road damage; and construction impacts would occur only during a single phase. The level of impact significance would not change, however. Operational impacts would be similar to those of the Project.

Water Resources

Construction would occur in the same general areas using the same methods as under the Project; therefore, construction would result in the same types of impacts associated with

erosion and sedimentation from construction activities, as well as the same types of impacts to water quality from small fuel or oil spills, concrete, and trash and litter during construction. Changes to stormwater runoff, flooding, and hydrologic conditions would be similar, as would the removal or reduction of vegetation from the buffer zone of streams, creeks, or wetlands. Impacts could be somewhat reduced because less construction would be needed, but the significance of impacts would be unchanged. Operational impacts, including impacts to groundwater, would be as described for the Project.

Other Issue Areas

Impacts to other issue areas (recreation, mineral resources, utilities/service systems, and population/housing) would be as described for the Project.

5.3.2 Power Line Route Alternative 1

This section addresses an alternative to the Project's 115-kV power line route, which interconnects with the PG&E electric grid. This is the only power line route alternative brought forward for comparative analysis. This alternative is designated Power Line Route Alternative 1 to distinguish it clearly from the power line route alternatives considered and dismissed in Section 5.2.

5.3.2.1 Description of Power Line Alternative 1 (Re-routing to Minimize Visual Impacts)

This Applicant-proposed alternative power line route was developed to minimize the visual impacts associated with the Project power line route as proposed. This route is shown on Figure 5.3-2. This route is evaluated at a sufficient level of detail for permitting purposes, and compared to the Project power line route in Section 5.3.2.2. This alternative is the Applicant-preferred power line route alternative.

Power Line Route Alternative 1 would follow the Project power line route until it reached angle point 27. From this point, it would descend the hill and then connect to the existing 115-kV line that serves the Celite mining facility (the Manville Tap) at pole K. The connection point is approximately 340 feet south of the Lompoc City limit and 1,450 feet east of Beattie Park in the City of Lompoc. Intermediate poles are not expected to be required to span between angle point 27 and pole K. Existing Celite pole K would be replaced with a tubular steel pole set on a concrete foundation. Two switches would be mounted on this pole and would electrically separate the Celite facility from the Project Substation for power line maintenance as required. Pole K would be similar to the pole shown in Figure 5.3-3. While design details have not been provided, it is reasonable to assume that poles J and K will be 10 to 20 feet taller and that the conductors will be heavier than the existing Celite line in the same location. From the new pole, the power line would continue northeasterly and northerly in the existing 115-kV Manville Tap and No. 2 Cabrillo-Divide 115-kV power line alignments as a single circuit line.

From the new pole K, PG&E would re-conductor approximately 5,000 feet of the existing 115-kV Manville Tap power line and the No. 2 Cabrillo-Divide 115-kV power line to existing Celite pole A (located along San Julian Street approximately 700 feet north of East Ocean Avenue) to increase the current carrying capability to accommodate the generation output of the LWEF. The new replacement wooden or single steel poles for this portion of the line would be similar to the existing wooden poles, although they could be 10 to 20 feet taller.

The existing pole switch at existing Celite pole E along SR-1 would no longer be required and would be removed. In comparison to the proposed power line route, this alternative would result in a reduction of three to four power poles that would be visible against the skyline within direct view of northbound travelers on SR-1 and from the Lompoc neighborhood north of the hill.

5.3.2.2 Description of Impacts

Aesthetics/Visual Impacts

Section 3.2.1 discusses the purpose and scope, aesthetic issues relating to WTGs, and an overview of methodology. These remain the same under Power Line Alternative 1. Existing conditions for this alternative are unchanged from those described in Section 3.2.2, which discusses the existing regional and local landscape setting. The regulatory framework described in Section 3.2.3 is applicable to this alternative, as well as the Project. This alternative was analyzed using the same simulation methodologies and evaluation process as defined in Section 3.2.4. Impacts from this alternative would differ from those of the Project, and are described below.

Impact ALT-VIS-1: Views from KOP 2 (Northbound SR-1). As shown on Figure 5.3-3, which simulates what the power line would look at from Key Observation Point (KOP) 2, all but approximately 1 ¼ of the silhouetting poles and approximately 80 percent of the lines visible above the ridgeline from SR-1 facing north under the Project would be removed. While this portion of SR-1 has been designated as a scenic corridor, the adjacent hillsides have visible ranch roads and fencing, fire brakes, and a small borrow pit. Therefore, the scenic quality is not as high, nor are viewers as sensitive in their expectations as in other areas. The resulting ratings are moderate/high for both the criteria of scenic quality and viewer sensitivity. With the removal of the majority of the silhouetting poles and line from this vantage point, the Impact Severity would be reduced to moderate. As a result, the significant, unavoidable impact identified for the Project would be reduced to the level of significant but mitigable (*Class II*).

Impact ALT-VIS-2: Views from Southbound SR-1 and Southeast Lompoc Residential Streets. From the residential neighborhood of southeast Lompoc, the alternative power line route would be seen in the context of urban Lompoc and the existing Celite line. The visual character of this area is urban/suburban with an open space backdrop. The scenic quality is classified as moderate. The closest public recreation area is Beattie Park, which is almost a third of a mile west of where the alternative line would cross over the ridge and angle eastward. The power line is not part of the visual context of Beattie Park. Public viewing areas of the co-location of this power line route alternative with the existing Celite line are limited since this view is blocked by an existing residential neighborhood where the back yards (rear portion of the houses) are oriented towards the range of hills under discussion. From the residential streets there would be few direct views of this power line route alternative since homes block the views from adjacent streets; any views will be narrow and mostly of the conductors. While individual poles may be glimpsed, they will be in the same context as the existing Celite pole structure. Viewer sensitivity is classified as moderate.

For southbound travelers on SR-1 the alternative power line location would also be seen in the context of urban Lompoc and the existing Celite line. The visual character of this area is

also urban/suburban but the viewer is experiencing a transition from more urban uses to the more rural/open space backdrop along southbound SR-1 past the City of Lompoc boundary. The scenic quality is classified as moderate. Southbound travelers may get a brief view of the eastern extension of the line within the context of the existing Celite power line corridor. For these travelers, the sensitivity level is rated as moderate/high because they would be moving into the more scenic areas of SR-1 to the south.

For both views (southbound SR-1 and the southeast Lompoc residential neighborhood), impact severity is determined by comparing the existing Celite line with the power line route alternative. There is the potential for additional poles to be added at expected angle points (Figure 5.3-3) and taller poles may be required to accommodate additional conductors at the top of the poles. While these poles will be taller and larger structures as compared with the existing poles, these changes would occur within the visual context of the existing Celite line corridor. This alternative would result in minimal additional silhouetting against the sky when compared to any existing silhouetting from the Celite line from both views. The impact severity for both views is moderate. The visual impact from both views would be adverse, but less than significant (*Class III*).

Mitigation Measure ALT-VIS-1: Visibility of Power Line. At the southeast corner of the City of Lompoc where the power line would be visible from SR-1, the following measures shall be used where technically feasible to minimize visual impacts: longer spans between poles; shorter poles; straddle ridgeline with two poles instead of a single pole on the ridgeline (*Addresses Impact ALT-VIS-1*).

Plan Requirement: Power line location and pole sizing shall be submitted to the County for review and approval.

Timing: County shall approve plan prior to the issuance of the zoning clearance for the first phase of construction.

MONITORING: County staff will inspect prior to occupancy clearance.

Residual Impact

With the implementation of Mitigation Measure ALT-VIS-1, residual visual impacts would be less than significant.

Agricultural Resources

The descriptions of existing conditions, including zoning, Important Farmland in the power line corridor, and existing agricultural uses (Section 3.3.1); regulatory framework (Section 3.3.2); and impacts, mitigation measures, and residual impacts (Section 3.3.3) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.3.3.

Air Quality

The descriptions of existing conditions, including climate and meteorology, and existing air quality; (Section 3.4.1); regulatory framework (Section 3.4.2); and impacts, mitigation measures, and residual impacts (Section 3.4.3) developed for the Project are applicable to

this alternative, as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.4.3.

Biological Resources

The descriptions of wildlife in Sections 3.5.3.1 and 3.5.4.1 are applicable to this alternative, as are the discussions of regulatory framework (Section 3.5.5), impact assessment methodology (Section 3.5.6.1), and thresholds of significance (Section 3.5.6.2). Figure 3.5-3 was updated to reflect these refinements. The descriptions of existing conditions for common vegetation and special-status plant species are applicable to the power line corridor; however, they have been refined to include specific information for the new portion of the alignment based on a pedestrian survey conducted by Katherine Rindlaub, Jennifer Scholl, and John Day on May 16, 2007.

Refined Baseline Data Collection. The May 2007 pedestrian survey focused on a corridor approximately 200 feet wide on either side of the existing power line and a similar corridor between the top of the ridge and the midslope line to survey the new corridor from angle point 27 to existing Celite pole K. Vegetation 1,000 feet out from the midslope line corridor was interpreted from aerial photography and examined through binoculars, consistent with the baseline data collection conducted for the Project. The results of this survey are presented below, followed by a discussion of new impacts to vegetation. The plants observed in the area during the May 2007 survey are shown in Table 5.3-1.

TABLE 5.3-1
Plant Species Observed in the Alternative Power Line Route

Common Name	Scientific Name	I/N	Introduced Annual Grassland	Central Coastal Scrub	Habitat
White yarrow	<i>Achillea millefolium</i>	N		X	Biennial/Perennial Herbs
California sagebrush	<i>Artemisia californica</i>	N		X	Shrubs
Coyote brush	<i>Baccharis pilularis</i> <i>ssp. consanguineous</i>	N	X	X	Shrubs
Mustard	<i>Brassica nigra</i>	I	X	X	Annual/Biennial Herbs
Madrid brome	<i>Bromus madritensis</i>	I	X	X	Annual/Biennial Herbs
Morning-glory	<i>Calystegia macrostegia</i> <i>ssp. cyclostegia</i>	N		X	Vines
Italian thistle	<i>Carduus pycnocephalus</i>	I	X	X	Annual/Biennial Herbs
Indian paintbrush	<i>Castilleja</i> sp.	N		X	Subshrubs
Hedge-parsley	<i>Caucaulis microcarpus</i> (<i>Yabea</i>)	N		X	Annual/Biennial Herbs
Soap plant	<i>Chenopodium californicum</i> (?)	N	X		Biennial/Perennial Herbs
Amole	<i>Chlorogalum pomeridianum</i>	N		X	Biennial/Perennial Herbs

TABLE 5.3-1
Plant Species Observed in the Alternative Power Line Route

Common Name	Scientific Name	I/N	Introduced Annual Grassland	Central Coastal Scrub	Habitat
Poison hemlock	<i>Conium maculatum</i>	I	X		Biennial/Perennial Herbs
Blue dicks	<i>Dichelostemma capitata</i>	N		X	Biennial/Perennial Herbs
California fuchsia	<i>Epilobium</i> sp.	N		X	Biennial/Perennial Herbs
Small-flowered buckwheat	<i>Eriogonum parvifolium</i>	N		X	Shrubs
Golden yarrow	<i>Eriophyllum confertiflorum</i>	N		X	Shrubs
Eucalyptus	<i>Eucalyptus</i> sp.	I	X		Trees
Fennel	<i>Foeniculum vulgare</i>	I	X		Biennial/Perennial Herbs
Goldenbush	<i>Isocoma vernonioides</i> ssp. <i>grindeloides</i>	N		X	Shrubs
Nuttall's bedstraw	<i>Galium nuttallii</i>	N		X	Biennial/Perennial Herbs
Giant wild rye	<i>Leymus condensatus</i>	N	X	X	Perennial Grasses
Ryegrass	<i>Lolium</i> sp.	I	X		Perennial Grasses
Bush lupine	<i>Lupinus</i> cf. <i>albifrons</i>	N	X		Shrubs
Wild cucumber	<i>Marah</i> sp.	N	X	X	Vines
Monkeyflower	<i>Mimulus aurantiacus</i>	N		X	Shrubs
Needlegrass	<i>Nassella</i> sp.	N		X	Perennial Grasses
Phacelia	<i>Phacelia</i> cf. <i>distans</i>	N	X		Annual/Biennial Herbs
One-sided bluegrass	<i>Poa</i> cf. <i>secunda</i>	N		X	Perennial Grasses
Hummingbird sage	<i>Salvia spathecea</i>	N		X	Biennial/Perennial Herbs
Elderberry	<i>Sambucus mexicana</i>	N		X	Shrubs
Snakeroot	<i>Sanicula</i> cf. <i>crassicaulis</i>	N		X	Biennial/Perennial Herbs
Figwort/Bee plant	<i>Scrophularia</i> sp.	N		X	Biennial/Perennial Herbs
Wood mint	<i>Stachys bullata</i>	N		X	Annual/Biennial Herbs
Poison oak	<i>Toxicodendron diversilobum</i>	N	X	X	Shrubs

TABLE 5.3-1
Plant Species Observed in the Alternative Power Line Route

Common Name	Scientific Name	I/N	Introduced Annual Grassland	Central Coastal Scrub	Habitat
Vervain	<i>Verbena lasiostachys</i>	N	X	X	Biennial/Perennial herbs
Zorro fescue	<i>Vulpia megalura</i>	I	X		Annual/Biennial Herbs

I – Introduced

N – Native

Common Vegetation. Vegetation in this alternative power line corridor consists of ruderal annual grassland, particularly at the lower elevations and along old roads and the northwest-facing slope just west of existing Celite pole K. It appears that existing Celite pole K is accessed for maintenance from the northwest (angling downslope). East of existing Celite pole K, the upper slopes have thin soil with numerous rock outcrops and are vegetated by diverse Central Coast scrub. At the lower edge of the scrub, where the slope becomes gentler, the Central Coast scrub diversity drops; coyote brush becomes dominant, and small pockets of elderberry occupy the deeper folds where runoff probably is concentrated as it flows from upslope areas. A few willows were seen at the lowest elevation near SR-1.

Rare Plants. Coast tarweed, *Hemizonia (Dienandra)*, was not observed. Gaviota tarplant (*Hemizonia increscens* ssp. *villosa*) was also not observed, although this species would be extremely unlikely in this area due to the clayey soil and distance from the coast. Although additional populations of Gaviota tarplant recently have been found, they usually are on at least a sandy loam soil. Tarplant were not in flower at the time of the survey, making observation difficult.

A few figworts were observed in the coastal scrub on the hillside. They had not flowered at the time of the survey, and given the lack of rain this year, may not flower until additional moisture is available. Without flowers, it could not be determined whether these plants were black-flowered figwort (*Scrophularia atrata* – CNPS 1B) or the more common California bee plant (*Scrophularia californica*). Both are known to occur in clayey soil.

Impact ALT-BIO-1: Common Vegetation. Existing Celite pole K is located in a patch of ruderal annual grassland and can be accessed from the existing two-track road that follows the northern property boundary. If a new pole is needed in this location, between the ridge and pole K, locating it upslope and slightly westward of existing pole K would impact only ruderal or annual grassland vegetation, if existing dirt roads were used for access. If the existing roads were not used, Central Coast scrub would be disturbed. Impacts to common vegetation would be adverse, but less than significant (*Class III*), because these vegetation communities are common and widely distributed. Additionally, annual grasslands have been disturbed by cattle grazing and have a low habitat value. Areas of temporary disturbance would be reseeded, which would further reduce the potential for adverse impacts.

Impact ALT-BIO-2: Rare Plants. Depending on the specific location of the power poles, black-flowered figwort could be disturbed. Impacts would be significant but mitigable (*Class II*).

Mitigation Measure ALT-BIO-1: Vegetation Avoidance for Replacement of Existing Power Pole K. The area that would be disturbed if power pole K is replaced shall be surveyed for the presence of black-flowered figwort during its blooming season. If this species is found, the power pole shall be relocated in an area 150 feet or more north (down-slope) of the existing location to avoid impacts to black-flowered figwort. Alternatively, the pole may be relocated to avoid figworts without the additional survey.

Plan Requirement: In the event of relocation, the Applicant shall show that the location of the new pole avoids figwort on the final plans.

Timing: The County shall approve the location of pole K prior to zoning clearance for construction of the power line.

MONITORING: The County will inspect construction activities to ensure that the pole is avoids figwort (*Addresses Impact ALT-BIO-2*).

Residual Impact

With the implementation of Mitigation Measure ALT-BIO-1, residual impacts to biological resources would be less than significant.

Cultural Resources

The descriptions of existing conditions, including prehistoric setting, ethnographic setting, and historic setting (Sections 3.6.1 and 3.6.4.2); regulatory framework (Section 3.6.7); and impacts, mitigation, and residual impacts (Section 3.6.8) developed for the Project are applicable to this alternative. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.6.8.

Energy/Electric Utilities

The descriptions of existing conditions, including the PG&E service area, facilities, and sources of power (Section 3.7.1); regulatory framework (Section 3.7.2); and impacts, mitigation measures, and residual impacts (Section 3.7.3) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.7.3.

Fire Protection and Emergency Services

The descriptions of existing conditions, including fire hazards and fire protection and emergency services (ambulance and police services) (Section 3.8.1); regulatory framework (Section 3.8.2); and impacts, mitigation, and residual impacts (Section 3.8.3) developed for the Project are applicable to this alternative, as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.8.3.

Geology/Soils

The descriptions of existing conditions, including regional geology and physiography, Project area geology and geomorphology, soil descriptions, and geologic hazards (Section 3.9.1); regulatory framework (Section 3.9.2); and impacts, mitigation measures, and

residual impacts (Section 3.9.3) developed for the Project are applicable to this alternative, as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.9.3.

Land Use

The descriptions of existing conditions, including land uses, zoning, and land use designations (Section 3.10.1); regulatory framework (Section 3.10.2); and impacts, mitigation measures, and residual impacts (Section 3.10.3) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.10.3.

Noise

The descriptions of existing conditions, including ambient noise levels and regulatory framework (Section 3.11.1); and impacts, mitigation measures, and residual impacts (Section 3.11.2) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.11.2.

Paleontological Resources

The descriptions of existing conditions, including paleontological sensitivity (Section 3.12.1); regulatory framework (Section 3.12.2); and impacts, mitigation measures, and residual impacts (Section 3.12.3) developed for the Project are applicable to this alternative, as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.12.3.

Risk of Accidents/Hazardous Materials/Safety

The descriptions of existing conditions, including electromagnetic fields associated with power lines and the use of hazardous materials in the Project area (Section 3.13.1); regulatory framework (Section 3.13.2); and impacts, mitigation measures, and residual impacts (Section 3.13.3) developed for the Project are applicable to this alternative as well. Consistent with the proposed power line, Power Line Route Alternative 1 also has overhead power lines in close proximity to residences that could potentially expose residents along the route to EMFs. Like the proposed route, these include two residences on upper San Miguelito Road near the LWEF site and a number of residences adjacent to San Miguelito Road (from 1259 to 1441 San Miguelito Road). Alternative Power Line Route 1 would also run within in 200 feet of a number of residences near the eastern end of Sheffield Drive and several residences near the southern end of Somerset Place. Several more residences along Sheffield Drive might also be closer than 200 feet if existing pole K is moved down-slope to comply with mitigation measure Alt-BIO-1.

Implementation of this alternative would not change the impact classifications included in Section 3.13.3.

Transportation/Circulation

The descriptions of existing conditions, including roadways, traffic conditions, constraints to truck traffic, and bicycle facilities (Section 3.14.1); regulatory framework (Section 3.14.2);

and impacts (Section 3.14.3), mitigation measures (Section 3.14.4 and 3.14.5), and residual impacts (Sections 3.14.6) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.14.3.

Water Resources

The descriptions of existing conditions, including surface and groundwater resources (Section 3.15.1); regulatory framework (Section 3.15.2); and impacts, mitigation measures, and residual impacts (Section 3.15.3) developed for the Project are applicable to this alternative as well. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.15.3.

Other Issue Areas

The description of impacts to other issue areas (recreation, mineral resources, public services, utilities and services systems or population and housing) would be as described in Section 3.16. Implementation of this alternative would not change the impact descriptions or classifications included in Section 3.16.

Comparative Impacts

Impacts from Power Line Alternative 1 would be the same as those described for the Project with two exceptions; impacts to aesthetic/visual and biological resources would differ.

Aesthetics/Visual Resources

The Project power line would result in a significant, unavoidable impact (*Class I*) to views from KOP 2 given the additional poles that would be visible along the ridgeline which would be visible from both the south and the north approaches of SR-1 and the community of Lompoc. Under Power Line Alternative 1, this impact would be reduced by removing all but 1 ¼ of the poles visible along the ridgeline and co-locating the power line for the eastern 1,200 feet with the existing Celite line north of the ridge as shown on Figure 5.3-2. This alternative would reduce the visibility of the power line on the ridgeline as viewed from both the east (along SR-1) and from the north (Lompoc neighborhood). The new power line and larger poles on the hillside would increase existing visual impacts as viewed from the north. This alternative route would decrease the aesthetics/visual impacts to a significant but mitigable level (*Class II*), for northbound viewers traveling on SR-1, as shown on Figure 5.3-4, and it would be adverse, but less than significant (*Class III*) for viewers in the eastern portion of the Lompoc community and for those traveling southbound on SR-1.

Agricultural Resources

Both the Project and Power Line Alternative 1 would result in similar impacts to agricultural resources and activities during construction and operation. The impact significance would not change.

Air Quality

Both the Project and Power Line Alternative 1 would result in similar quantities of short-term emissions of NO_x, ROC, and PM₁₀ emissions during construction. Operations and maintenance impacts would be similar to the Project. Impact significance would not change.

Biological Resources

This alternative and the Project would have the same impacts to wildlife and plant species, including special-status species, with one exception. Power Line Alternative 1 has the potential to disturb black-flowered figwort, which would be a significant but mitigable impact (*Class II*).

Cultural Resources

This alternative would result in similar impacts to the known cultural resources in the area as discussed in Section 3.6.4.2. Consistent with the Project, direct impacts may be avoided through minor design modifications. Project design would incorporate measures to completely avoid as many of these sites as possible. Because the cultural resources survey methodology included inventory of a wide corridor for the explicit purpose of allowing for design flexibility, avoidance could be possible in many cases. Impact significance would not change.

Energy/Electric Utilities

Like the Project, this alternative would support United States Department of Energy and California goals related to the production of energy from renewable sources, as well as state legislation related to the reduction of GHG emissions. Construction and operation of this alternative would result in consumption of nonrenewable energy resources similar to the Project.

Fire Protection and Emergency Services

Impacts to fire protection and emergency services would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Geology/Soils

Impacts to geology and soils would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Land Use

Impacts to land use would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Noise

Impacts to noise would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Paleontological Resources

Impacts to paleontological resources would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Risk of Accidents/Hazardous Materials/Safety

Impacts to risk of accidents, hazardous materials, and safety would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location. Power Line Route Alternative 1 would run closer to residences along Sheffield Drive, east of Barrington Place in Lompoc, increasing the potential for electromagnetic field (EMF) exposure. Consistent with the proposed route, Alternative Power Line Route 1 also proposes a 200-foot power line corridor that would provide some flexibility in siting the power line. However, this would not ensure that a minimum 200-foot setback is maintained from all residences.

PG&E would implement the same EMF reduction measures as described in Section 3.13.3. Impacts would be less than significant.

Transportation/Circulation

Impacts to transportation and circulation would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Water Resources

Impacts to risk of accidents, hazardous materials, and safety would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

Other Issue Areas

Impacts to recreation, mineral resources, utilities/service systems, and population/housing would be as described for the Project, because this alternative would result in the construction of the same type of power line in the same basic location.

5.3.3 No Project Alternative

5.3.3.1 Description of No Project Alternative

Under this alternative, the LWEF and associated power line would not be constructed, and the underlying land uses at the Project sites would remain unchanged. PG&E would be required to develop other sources of renewable energy to comply with California RPS, which requires it to increase the amount of renewable energy it procures each year by 1 percent until the renewable energy content of its electricity portfolio equals 20 percent. PG&E must meet this 20 percent level by the year 2010.

5.3.3.2 Comparative Impacts

Aesthetics/Visual

Under the No Project Alternative, there would be no new visual impacts from the installation or operation of the Project. Therefore, the current aesthetics and visual character of the site and surrounding properties would remain unchanged from current conditions.

Agricultural Resources

Under the No Project Alternative, there would be no conversion of farmland or grazing land, and agricultural resources would remain unchanged from current conditions. As described in Section 3.3.1, the current agricultural and grazing activities would continue. No Project-related impacts to agricultural resources would occur. Nor would beneficial impacts to agricultural uses occur, including improvements to ranch roads, financial support to property owners that could be used to improve agricultural facilities, or increased likelihood that the land will remain in agricultural use.

Air Quality

Under the No Project Alternative, there would be no new adverse impacts to air quality, and the ambient air quality would remain unchanged from current conditions. Additionally, the Project's potential to reduce GHG emissions, potentially displacing the need for the construction and operation of fossil fuel power plants, would not be realized.

Biological Resources

Under the No Project Alternative, there would be no new adverse impacts to biological resources, and therefore, these resources within the Project area would remain unchanged from current conditions. As described in Sections 3.3.1 and 3.5.2.8, the current agricultural and grazing activities would continue.

Cultural Resources

Under the No Project Alternative, there would be no new adverse impacts to known or unknown cultural resources in the area of the Project and therefore the condition of these resources would remain unchanged from current conditions.

Energy/Electric Utilities

Under the No Project Alternative, the potential to reduce GHG emissions, potentially displacing the need to construct and operate fossil fuel power plants, would not be realized. In addition, the generation of electricity from a renewable source would not occur, and the United States Department of Energy goals related to wind power and California RPS goals would not be met. Since construction and operation of the Project would not occur, there would not be a need for electricity and fuel sources to supply these activities. Therefore, there would be no new adverse impacts to local energy/electric utilities; and these utility systems would remain unchanged from current conditions.

Fire Protection and Emergency Services

Under the No Project Alternative, there would be no new adverse impacts to fire protection and emergency services. Without the Project, the improvements to the existing ranch road systems and the construction of new ranch roads to install and operate the WTGs would not occur. Thus, the improved access provided by these roads to access remote ranch areas and the use of these roads as fire breaks would not be realized. Therefore, the existing fire protection and emergency services infrastructure in the Project area would remain unchanged from current conditions.

Geology/Soils

Under the No Project Alternative, there would be no new adverse impacts to geology or soils. Without the Project, the improvements to the existing ranch road systems and the construction of new ranch roads to install and operate the WTGs would not occur. Additionally, the plan for filling existing eroded gullies with excess construction spoils to minimize the existing erosion processes would not occur. Therefore, the existing geology and soils in the Project area would remain unchanged from current conditions.

Land Use

Under the No Project Alternative, no new adverse land use impacts would occur. As described in Section 3.3.1, the current agricultural and grazing activities would continue. Therefore, the existing land uses in the Project area would remain unchanged from current conditions.

Noise

Under the No Project Alternative, no new adverse noise impacts would occur. Therefore, the ambient noise levels in the Project area would remain unchanged from current conditions.

Paleontological Resources

Under the No Project Alternative, there would be no new adverse impacts to known or unknown paleontological resources in the area of the Project, and therefore, the condition of these resources would remain unchanged from current conditions.

Risk of Accidents/Hazardous Materials/Safety

Under the No Project Alternative, no new adverse risks, hazardous materials use and transport, or safety impacts would occur. Therefore, the existing risks and safety issues in the Project area and the use and transport of hazardous materials would remain unchanged from current conditions.

Transportation/Circulation

Under the No Project Alternative, no new adverse impacts to the existing transportation system and roadway circulation would occur. Therefore, the existing transportation system and roadway circulation in the Project area would remain unchanged from current conditions.

Water Resources

Under the No Project Alternative, no new adverse impacts to water resources would occur. Without the Project, the plan for filling existing eroded gullies with excess construction spoils to minimize the existing erosion processes would not occur. Therefore, the existing water resources in the Project area would remain unchanged from current conditions.

Other Issue Areas

Under the No Project Alternative, no new adverse impacts to recreation, mineral resources, utilities, service systems, or population and housing would occur. Therefore, the existing

recreation and mineral resources, utility and service systems, and population and housing in the Project area would remain unchanged from current conditions.

5.4 Environmentally Superior Alternative

Consistent with the CEQA requirements outlined in Section 5.1, the comparative analysis presented in Section 5.3 of two alternative site layouts and power line routes is presented at a level of detail to allow meaningful evaluation, analysis, and comparison with the Project. Although most alternatives considered in this analysis were not evaluated at a project level of detail, Power Line Route Alternative 1 is evaluated at a project level of detail, for the reasons described in Section 5.3.2. This route was developed by the Applicant during the preparation of the EIR and proposed as a Project application amendment in order to minimize significant visual impacts to travelers along SR-1. As discussed in Section 5.2, alternative site locations for the LWEF were identified, as well as seven alternative power line alignments; however, all of these alternatives were eliminated from further consideration based upon the determination that they were infeasible, or that they either did not minimize or increased potential environmental impacts.

5.4.1 Summary of Comparative Impacts

As alternative LWEF layouts and power line routes are considered separately, selection of the environmentally superior Project alternative requires identifying both the environmentally superior LWEF layout and the power line route.

The analysis contained in this EIR concluded that the proposed Project and all the alternatives considered, except the No Project Alternative, would result in significant and unavoidable (Class I) impacts from avian mortality resulting from collisions with WTGs. The proposed Project would also result in significant and unavoidable (Class I) visual impacts from the degradation of scenic resources from the WTGs visible from Jalama Beach County Park and from the power line route visible to travelers along SR-1.

In addition, the proposed Project and all the alternatives considered, except the No Project Alternative, would also result in significant, but mitigable (Class II) impacts on various resource areas including: aesthetics/visual resources, air quality, biological resources, cultural resources, fire protection and emergency services, geology/soils, land use, noise, paleontological resources, risk of accidents/hazardous materials/safety, and transportation/circulation.

5.4.2 LWEF Alternative 2 – Environmentally Superior Alternative Rationale

LWEF Alternative 2 would eliminate the Class I visual impacts at Jalama Beach County Park. It would also reduce most other impacts at the LWEF, to some extent, depending on how the WTGs were sited, as discussed in Section 5.3.1.2. In addition, it would limit the disruption from construction and large load traffic to one construction phase instead of potentially spreading the construction out over up to three phases for 7 years or more. LWEF Alternative 2 would satisfy all the Project objectives, though at a reduced level as compared to the proposed Project. The only objective that may not be satisfied is the one related to financial feasibility/supporting financing. However, this analysis is not required to address whether or not this financial objective can be met. Evidence suggests that LWEF

Alternative 2 may be feasible, since it is being proposed as the first phase, with no certainty that subsequent phases would be constructed.

5.4.3 Power Line Alternative Route 1 – Environmentally Superior Alternative Rationale

Power Line Route Alternative 1 reduces the Class I visual impacts along SR-1 to less than significant levels, with the implementation of mitigation measures. All of the other power line route alternatives were dismissed from further consideration because they would not reduce the Class I visual impacts to travelers along SR-1 and they would have greater impacts associated with ground disturbance to biological and cultural resources, or would be technically problematic, or would result in greater visual impact to the City of Lompoc. Further, Power Line Route Alternative D would be significantly more costly than Power Line Route Alternative 1, due to moving the Celite line or the significant costs of undergrounding portions of the line as described under Power Line Route Alternatives E and G. These potential additional environmental impacts and higher costs are disproportionate to any further reduction of the residual less than significant impacts of Power Line Route Alternative 1.

5.4.4 Environmentally Superior Alternative Selection

Based upon the foregoing analyses, the No Project Alternative would have the least significant impacts. However, the No Project Alternative would not meet the Project objectives presented in Section 1.3. Therefore, an environmentally superior alternative that meets the Project objectives and minimizes or eliminates the environmental impacts of the Project must be identified.

Of the alternatives considered that are potentially capable of meeting the Project objectives, the LWEF Alternative 2 (Phase I Only and restriction of WTG placement in the South and West corridors, as mitigated with all applicable Project mitigation measures identified in Section 3.0) combined with the Power Line Route Alternative 1 (Figure 5.3-2), as mitigated (refer to Section 5.3.2.2), would be expected to result in the least short-term and long-term environmental effects due to limiting the numbers of WTGs constructed, minimizing the visual impacts from Jalama Beach County Park, and minimizing the visual impacts to travelers along SR-1.