CHAPTER 6.0
ALTERNATIVES

CEQA Guidelines Section 15126.6(a) states that an environmental impact report shall describe and analyze a range of reasonable alternatives to a project. These alternatives should feasibly attain most of the basic objectives of the project while avoiding or substantially lessening one or more of the significant environmental impacts of the project. An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. The discussion of alternatives shall focus on those which are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6(b)).

CEQA Guidelines Section 15126.6(d) states that the EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. The matrix appears as **Table 6.0-1** at the end of this section.

6.1 PROJECT OBJECTIVES

The proposed Campo Verde Solar Project has the following objectives:

- Meet the terms and requirements of the Project's Power Purchase Agreement (PPA) and Large Generator Interconnection Agreement.
- Deploy a technology that has been commercially proven and that is safe, readily available, efficient, and environmentally responsible.
- Generate electricity at a cost that is competitive on the renewable market.
- Provide a new source of renewable energy to assist the State of California in achieving the RPS.
- Provide local construction jobs for a variety of trades, reducing unemployment in the construction sector.
- Locate the project in Imperial County in close proximity to the existing California Independent System Operator (CAISO) electric transmission system at a location which has available capacity to deliver electricity to major load centers in California.
- Locate the project in an area that ranks among the highest in solar resource potential in the nation.
- Minimize the potential impact to the environment by:
  - Locating the project on disturbed land.
  - Maximizing the use of existing infrastructure (transmission lines, roads, and water sources).
  - Minimizing the potential impacts to threatened and endangered species by avoiding sensitive habitats and designated resource, reserves or protected areas.
  - Reducing the emission of GHGs from the generation of electricity by using renewable energy.

The Campo Verde Solar Project was developed to sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to help meet California RPS goals.

The Applicant has a long-term PPA (20 years) with San Diego Gas and Electric (SDG&E) to purchase the initial output from the project.

The County's objectives include the following:

- Encourage economic investment in renewable energy activities.
- Increase opportunities for construction employment, reducing unemployment in one of the labor sectors most affected by the recession.
- Diversify Imperial County's the economic base by developing environmentally responsible non-agricultural activities.
- Increase tax revenue through sales, use and property taxes generated by renewable energy development within Imperial County.
- Reinforce Imperial County's position as a leader in renewable energy production.
- Expand the renewable energy sector in Imperial County's economy.

6.2 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR ANALYSIS

Identifying alternatives to the proposed project was limited by the fact that the project is a utility-scale solar project (i.e., a solar energy project that generates a large amount of electricity that is transmitted from a solar energy plant to many users through the transmission grid). Based on the nature of the project, it required three key considerations in order to determine where it could be sited: 1) an area with access to high solar insolation (i.e., exposure to the sun's rays) rates; 2) a large area to accommodate solar collectors; and, 3) access to the California Independent System Operator (CAISO) transmission system to send electricity to consumers. The proposed project site is currently designated "Agriculture" in the Imperial County General Plan and zoned A-2 - General Agriculture, A-2-R - General Agriculture, Rural Zone, and A-3 - Heavy Agriculture. The site was chosen for the reasons identified above regarding utility-scale solar projects. The southwestern portion of Imperial County has year-round unobstructed access to sunlight during daytime hours. Likewise, sufficient land area is available to accommodate a utility-scale solar project. The flat topography and contiguous nature of large blocks of land are ideal for the project. Lastly, and perhaps most importantly, is the site's proximity relative to the Imperial Valley Substation, a CAISO interconnection point. Access to connect to the substation is a key factor in providing utility-scale solar power to the transmission grid for distribution to consumers. Choosing an "Alternative Site" was considered, but not selected for detailed analysis. A feasible alternative site would likely either be an area already designated for future residential development or contain Prime Farmland or Farmland of Statewide Importance (95% of all agricultural lands in Imperial County). Likewise, an alternative site, if vacant and undisturbed, could potentially have greater impacts on habitat for endangered and threatened species than a site that is actively cultivated for agricultural purposes. The Applicant does not own or possess access to an alternative site in Imperial County to develop the proposed project. Moreover, alternative locations are not available in closer proximity to the Imperial Valley Substation, which is entirely surrounded by land managed by the Bureau of Land Management (BLM), which is subject to significant environmental and development constraints. Development of the proposed project at an alternative location is therefore infeasible because of the difficulties in assembling contiguous land and the result in additional and greater impacts associated with such a location and a longer gen-tie.

A larger solar generation facility site of approximately 2,266 acres in size was also considered but not selected for detailed analysis. This alternative included the same parcels as the proposed project (which

total 1,990 acres) plus four additional contiguous parcels (051-300-009-000, 051-300-008-000, 051-310-026-000, and 051-300-005-000) totaling approximately 276 acres which are under Williamson Act Contract. The addition of these parcels would allow the generation of 35 to 50 MWs of additional solar energy while impacting the same amount of BLM land to connect to the Imperial Valley Substation as the proposed project. The gen-tie for a larger solar project would follow the same route as the proposed gen-tie. While this alternative would meet the project objectives and provide more renewable energy, it would result in greater impacts to agricultural lands, including loss off prime farmland and cancellation of four Williamson Act Contracts. In addition, some of these parcels were located close to the Fig Lagoon which is used by several bird species. Exclusion of these parcels could reduce potential biological impacts. For these reasons, this alternative was not selected for analysis.

A distributed generation alternative to the proposed project was also considered but not selected for detailed analysis. A distributed PV generation alternative would consist of small-scale PV installations on private or publicly owned residential, commercial, or industrial building rooftops, parking lots or areas adjacent to existing structures such as substations. The location of such small-scale installations is not geographically constrained and, as relevant for CEQA purposes, could be located anywhere in the State. California currently has over 773 MW of distributed PV systems which cover over 40 million square feet (CPUC 2010).

Even assuming that there are enough additional sites throughout California for installation of sufficient distributed PV to accomplish the project's objective of generating 139 MW, this alternative cannot feasibly accomplish most of the project's objectives.

Because distributed generation is not geographically constrained, there is no guarantee that any portion of the solar installation would occur in Imperial County. As such, this alternative would not meet any of the County's objectives (i.e., economic investment in the County; diversifying the County's economic base; generating local jobs and tax revenue; reinforcing the County's position as a leader in renewable energy production; and expanding the local renewable energy sector). Furthermore, because distributed PV can be installed anywhere in the State, such installations could be installed in areas that do not meet the objective of locating the project in an area that ranks among the highest in solar resource potential. The County has no authority or influence over the installation of distributed PV generation systems outside of its jurisdiction. As such, there is no guarantee that action by the County to approve a distributed generation alternative would: 1) result in the installation of 139 MW of generating capacity; or, 2) support the objective of assisting the State of California meet to its RPS goals. For these reasons, a distributed solar alternative was not considered for further analysis.

Lastly, a reduced size project alternative that results in a reduction in power output would not meet the Project Objectives and was therefore not analyzed in detail. However, the Applicant is continually working to refine the project design to increase project efficiency and further reduce impacts to the environment and natural resources. Therefore, the project layout and associated impacts identified and analyzed in this Draft EIR are considered a conservative (worse case) scenario, and may be further revised and reduced in the Final EIR.

6.3 SUMMARY OF ALTERNATIVES ANALYZED

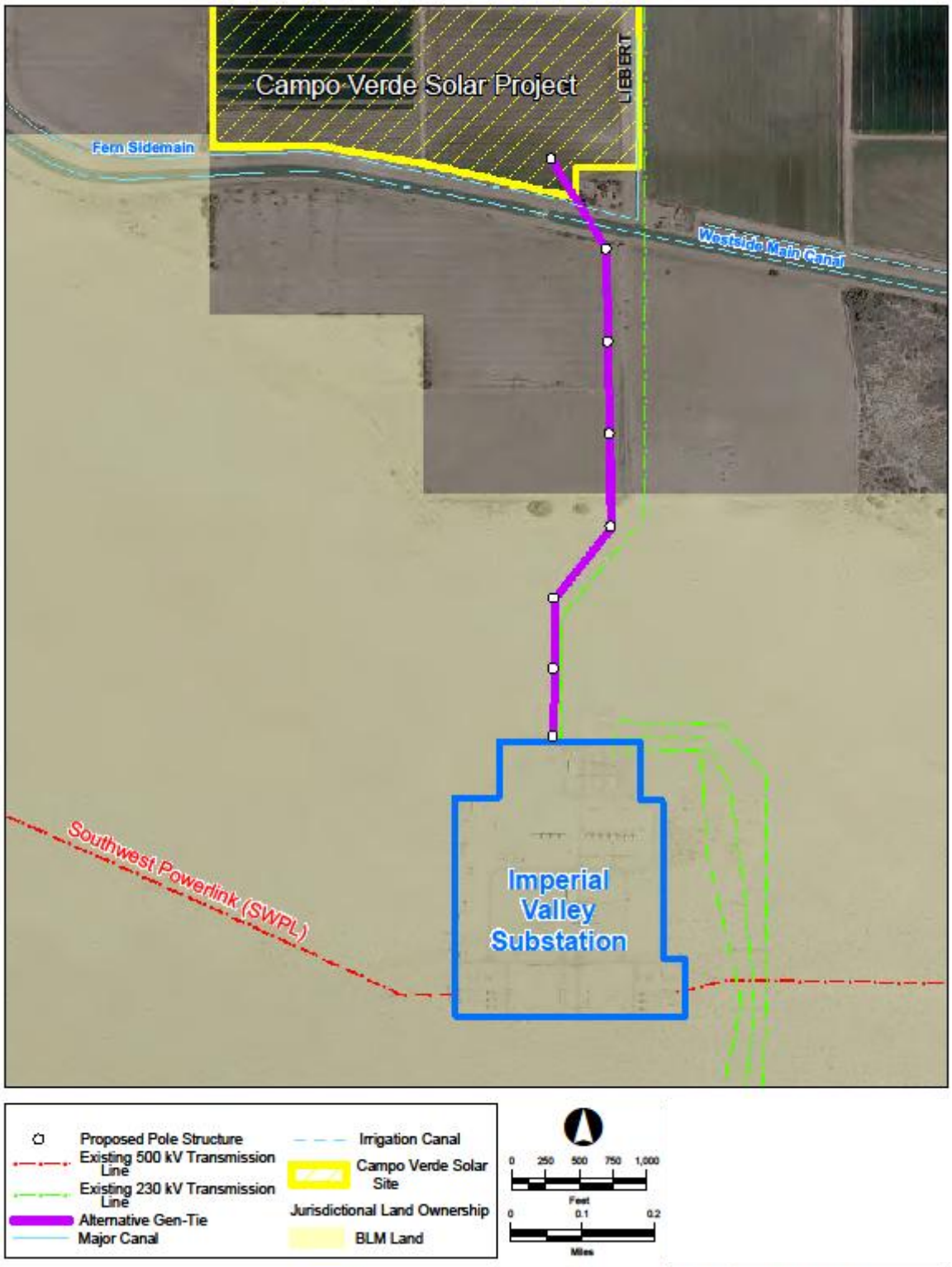
In accordance with the provisions of CEQA Guidelines Section 15126.6, the following alternatives to the proposed project are evaluated:

- **Alternative 1 - Alternative Gen-Tie Across BLM Land** - This alternative includes the same 1,990 acre solar generation facility site as the proposed project and proposes a gen-tie that would

follow the existing IID S-line and associated access road. A 0.9 mile Gen-tie is proposed including a 0.1 mile segment on the solar generation facility site. The gen-tie would also cross approximately 0.4 miles of BLM land and 0.4 miles of private land. The purpose of analyzing this alternative is to reduce the length of the gen-tie on BLM land. **Figure 6.0-1** depicts this Alternative Gen-Tie across BLM land.

- **Alternative 2 - Private Land Gen-Tie Alternative -** This alternative includes the same 1,990 acre solar generation facility site as the proposed project and proposes a 1.85 mile gen-tie that would originate from the western side of the solar generation facility site (0.1 mile segment) and cross approximately 1.75 miles of private lands to the west (**Figure 6.0-2**). The gen-tie would follow existing field roads and ditches to the Imperial Solar Energy Center West site. From this point, the proposed project would use available capacity on Imperial Solar Energy Center West's gen-tie line that has an approved right-of-way to the Imperial Valley Substation (**Figure 6.0-3**). The purpose of analyzing this alternative is to avoid construction of new transmission facilities on BLM land. **Figure 6.0-2** depicts this Private Land Gen-Tie Alternative.

- **Alternative 3 - No Action Alternative** – This alternative would result in continued use of the project site for agricultural production. The proposed Campo Verde Solar Project would not be developed.



Source: kp environmental, 2012.

FIGURE 6.0-1
ALTERNATIVE GEN-TIE ACROSS BLM LAND

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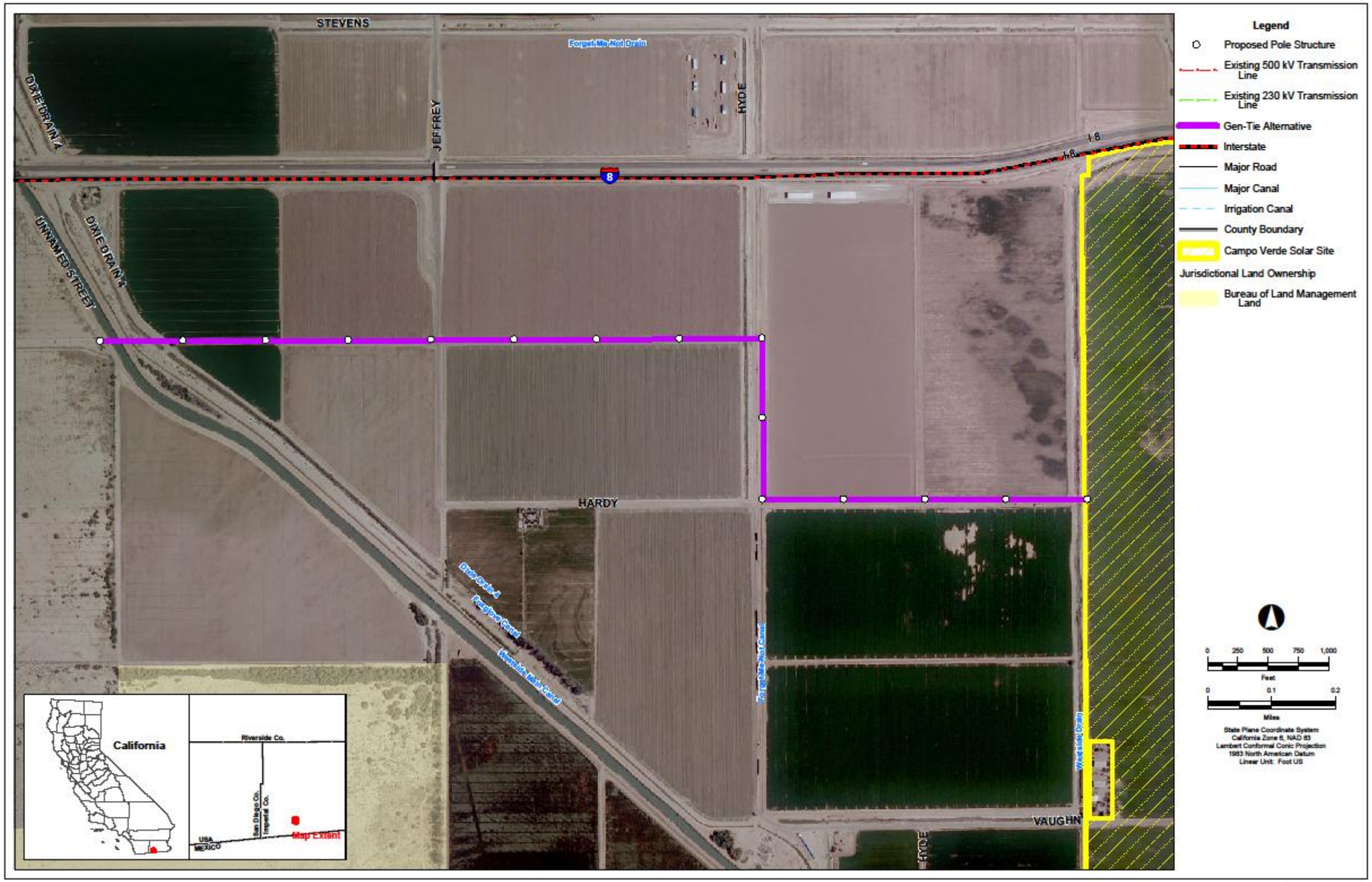
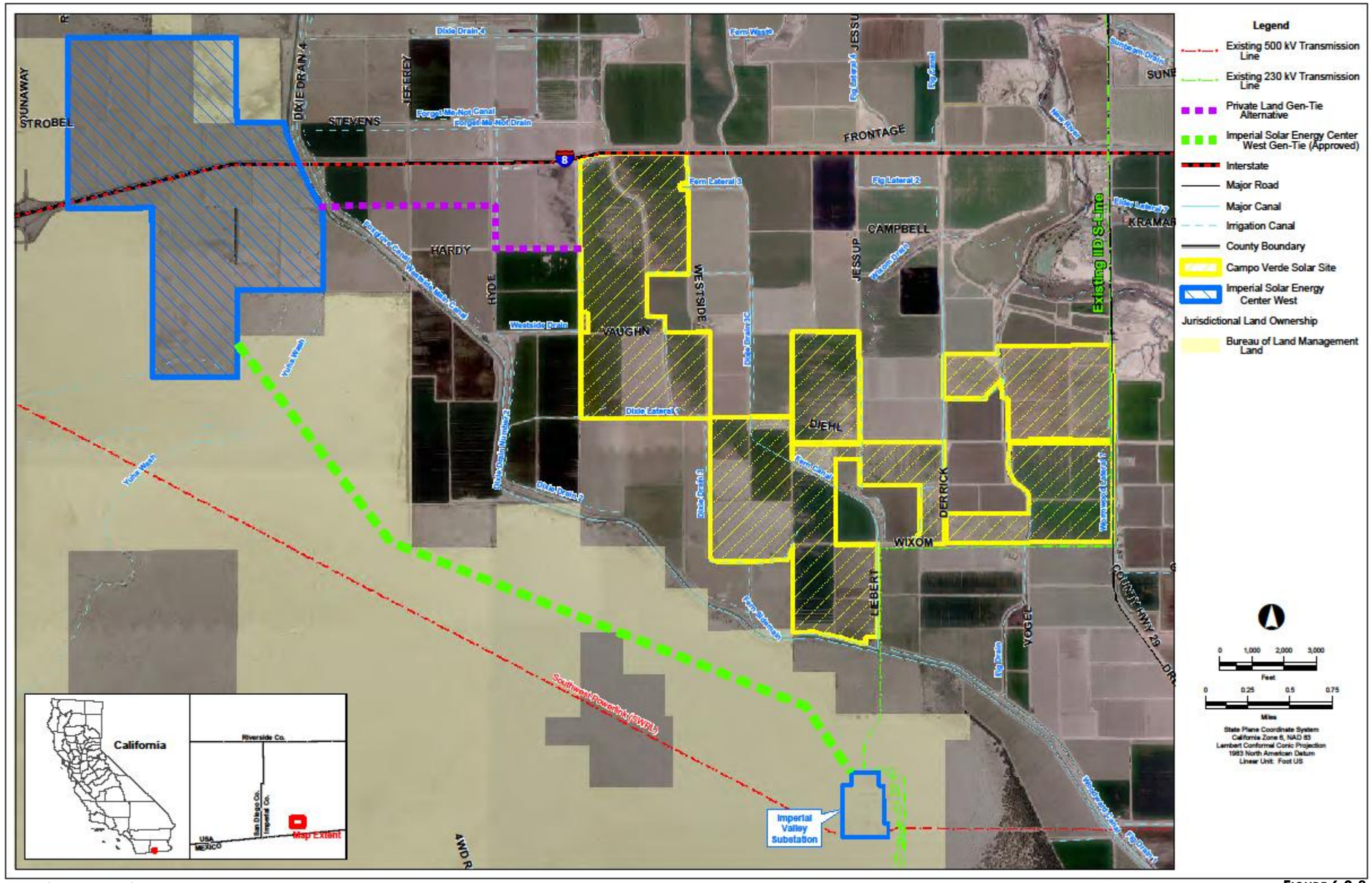


Source: kp environmental, 2012.

FIGURE 6.0-2
PRIVATE LAND GEN-TIE ALTERNATIVE



Source: kp environmental, 2012.

FIGURE 6.0-3
PRIVATE LAND ALTERNATIVE AND IMPERIAL VALLEY ENERGY CENTER WEST

6.4 ANALYSIS OF ALTERNATIVES

This section identifies the environmental effects of the alternatives and compares the environmental effects with those resulting from the proposed project. A table at the end of this section provides a summary of the comparisons. An "environmentally superior" alternative is also identified.

6.4.1 ALTERNATIVE 1 - ALTERNATIVE GEN-TIE ACROSS BLM LAND

Characteristics

Like the proposed project, the Alternative Gen-Tie across BLM land would construct a double-circuit 230 kV line interconnection to the Imperial Valley Substation. The gen-tie would parallel the existing IID S-line and be a total of approximately 0.9 miles long.

This alternative would begin on the southern portion of the solar generation facility site, cross the Westside Main Canal, and extend south approximately 0.4 miles through private land. From this point, the gen-tie would enter BLM land and continue south for approximately 0.4 miles to the Imperial Valley Substation.

Figure 6.0-1 shows the proposed alignment of the Alternative Gen-Tie across BLM land. **Table 6.0-1** summarizes the assessor's parcel number, acreage and nearest cross street/intersection for the privately owned parcels affected by this alternative.

TABLE 6.0-1
PRIVATELY OWNED PARCELS – ALTERNATIVE GEN-TIE ON BLM LANDS

Assessor's Parcel Number	Acreage	Nearest Cross Street/Intersection
APN 051-350-014	Part of solar project site	Liebert and Mandrapa Roads
APN 051-350-010	1.5 acres	Liebert and Mandrapa Roads
APN 051-350-011	3.6 acres	Liebert and Mandrapa Roads

Source: Imperial County Zoning Maps.

Table 6.0-2 summarizes the Township/Range and Sections for the BLM lands affected by this alternative.

TABLE 6.0-2
DESCRIPTION OF BLM LANDS ALTERNATIVE GEN-TIE ON BLM LANDS

Township / Range	Sections
16 ½S 12E	NW ¼ NE ¼ of Section 3
	SW ¼ NE ¼ of Section 3

Source: BLM, 2012.

Structures and Facilities

Fewer pole structures (8) and associated facilities would be required for the Alternative Gen-Tie across BLM land compared to the proposed project (11). Four pole structures are proposed on BLM land, three are proposed on private lands, and one is proposed on the solar generation facility site. Like the proposed project, a small 100-foot by 150-foot area around each pole structure site would be cleared of obstructions and temporarily used for construction on the BLM land. Up to five pulling / tensioning sites are expected to be needed on BLM land for this alternative. **Figure 6.0-1** shows the tentative locations of pole structure sites.

Construction Activities

The construction activities for the Alternative Gen-Tie across BLM Land would be the same as that described for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item D, "Construction Process for the Solar Generation Facility" and subsection 2.1.5, item F, "Construction Process for Gen-Tie."

Operations and Maintenance Activities

The operations and maintenance activities for the Alternative Gen-Tie across BLM Land would be the same as that described for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item E, "Operations and Maintenance of Solar Generation Facility" and subsection 2.1.5, item H, "Operations and Maintenance of Gen-Tie."

Decommissioning Activities

The decommissioning activities for the Alternative Gen-Tie across BLM Land would be the same as for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item F, "Decommissioning Plan" and subsection 2.1.5, item I, "Decommissioning and Restoration of Gen-Tie."

Design Features, BMPs, and Other Conditions

The design features and BMPs for the Alternative Gen-Tie across BLM Land would be the same as described for the proposed project. Refer to Chapter 2.0, subsection 2.1.5, item J, "Design Features and Best Management Practices."

Relationship to Project Objectives

Implementation of the Alternative Gen-Tie across BLM Land would fulfill the project's objectives to construct a solar generation facility. Development of the project would create a new source of renewable energy on previously disturbed land in a rural setting in proximity to the existing electric transmission system. Likewise, the Alternative Gen-Tie across BLM Land would support the objective of reducing the emission of GHGs from the generation of electricity. The Alternative Gen-Tie across BLM Land would allow the Applicant to meet its obligation to meet the terms and requirements of its Power Purchase Agreement which would aid progress in fulfilling the state's RPS and compliance with Executive Order S-14-08 and SB X1-2.

Comparative Impacts

Aesthetics

Under the Alternative Gen-Tie across BLM Land, the aesthetic condition of the project site would be altered in association with development of a solar generation facility identical to the proposed project. The solar generation facility site would include PV panels, inverters, transformers and a segment of the gen-tie and result in the same visual impacts from surrounding KOPs. The overall length of the gen-tie for the Alternative Gen-Tie across BLM Land would be slightly shorter (0.9 mile) than the proposed gen-tie (1.4 miles), and would have three fewer poles on BLM land. The additional towers on the solar generation facility site included as part of the proposed project would not be prominent because of the distance of the poles from the KOPs. New sources of light or glare would be similar for both the Alternative Gen-Tie across BLM land and the proposed project. Therefore, potential impacts to aesthetics would be similar for both the Alternative Gen-Tie across BLM and the proposed project.

Land Use

The solar generation facility site for the Alternative Gen-Tie across BLM Land is identical to the proposed project and has an existing General Plan land use designation "Agriculture" and an existing zoning of A-2 - General Agriculture, A-2-R - General Agriculture, Rural Zone, and A-3 - Heavy Agriculture. Like the proposed project, the Alternative Gen-Tie across BLM Land would require both a Conditional Use Permit (CUP) and a Variance. Potential impacts to land use would be similar under the Alternative Gen-Tie across BLM Land and the proposed project.

Transportation and Circulation

Short-term construction-related traffic increases similar to the proposed project would also occur under the Alternative Gen-Tie across BLM Land. As with the proposed project, impacts to intersections under cumulative conditions could be mitigated with payment of a fair share contribution for improvements. Long-term increases in vehicle traffic related to operation and maintenance of the proposed solar generation facility would be similar for both the Alternative Gen-Tie across BLM Land and the proposed project under all traffic scenarios modeled (Existing Year 2011 Plus Project Conditions, Year 2013 Conditions Without Project, Year 2013 Plus Project Conditions, Year 2013 Plus Project Plus Cumulative Conditions). However, slightly less maintenance traffic would be generated for the Alternative Gen-Tie across BLM Land because fewer towers would require maintenance compared to the proposed project. Overall, potential impacts to traffic and circulation would be similar for both the Alternative Gen-Tie across BLM Land and the proposed project.

Air Quality

Under the Alternative Gen-Tie across BLM Land, short-term construction-related air quality impacts would be slightly less than those of the proposed project because three fewer towers would be constructed. Emissions of NOx and PM_{10} would be generated in association with site preparation, equipment operation and vehicle trips. Similar exposure of sensitive receptors would occur for both the Alternative Gen-Tie across BLM Land and the proposed project but impacts would be mitigated through T-BACT and measures to reduce NOx and PM_{10}. Vehicle trip emissions associated with operation and maintenance would also be slightly less for the Alternative Gen-Tie across BLM Land compared to the proposed project because 3 fewer towers would require maintenance. Therefore, potential impacts to air quality would be slightly better for the the Alternative Gen-Tie across BLM Land compared to the proposed project.

Climate Change and Greenhouse Gases

Short-term construction-related greenhouse gas/climate impacts are anticipated to be slightly less for the Alternative Gen-Tie across BLM Land compared to the proposed project because less construction would be required. The reduction in towers associated with the Alternative Gen-Tie across BLM Land would mean less land disturbance and construction trips and associated emissions compared to the proposed project. Potential operational greenhouse gas/climate change impacts as a result of increased vehicle emissions for operations and maintenance would also be slightly less than the proposed project as there would be three fewer towers to maintain under Alternative Gen-Tie across BLM Land. Therefore, greenhouse gas/climate change impacts would slightly better under the Alternative Gen-Tie across BLM Land as compared to the proposed project.

Geology and Soils

The solar generation facility site would be identical for both the proposed project and the Alternative Gen-Tie across BLM Land and thus would be exposed to similar geologic and seismic hazards as the proposed project (seismic exposure, liquefaction, expansive soils, erosion, and corrosive soils). However the gen-tie component includes three fewer towers than the proposed project and thus would potentially be exposed to less damage associated with geology and soils. Therefore, geology and soils impacts would be better for the Alternative Gen-Tie across BLM Land compared to the proposed project.

Cultural and Paleontological Resources

Potential cultural resource impacts associated with potential disturbance of undiscovered resources on the solar generation facility is expected to be the same for both the Alternative Gen-Tie across BLM Land and the proposed project. Construction activities required to install the Alternative Gen-Tie across BLM Land (i.e., foundations installation, etc.) would disturb less land that the proposed project because three fewer towers are proposed. Therefore, potential impacts to cultural resources would better for the Alternative Gen-Tie across BLM Land compared to the proposed project.

Noise

Short-term construction-related noise impacts for the solar generation facility would be similar for both the Alternative Gen-Tie across BLM Land and the proposed project. Less construction noise would be generated by the Alternative Gen-Tie across BLM Land because three fewer towers would be built. Additionally, operational traffic noise and stationary noise impacts would be lower as less maintenance trips would be necessary to service fewer towers and the gen-tie would generate noise over a shorter span than the proposed project. Therefore, noise impacts would better for the Alternative Gen-Tie across BLM Land compared to the proposed project.

Agricultural Resources

Both the Alternative Gen-Tie across BLM Land and the proposed project would convert the project site from agricultural uses to a solar generation facility. No agricultural land aside from the solar generation facility site would be disturbed in association with either the Alternative Gen-Tie across BLM Land or the proposed project. Therefore, similar impacts to agricultural resources would occur in association with the Alternative Gen-Tie across BLM Land and the proposed project.

Hazards and Hazardous Materials

Risks associated with site hazards, including construction activities and conditions (e.g., soil disturbance and use of hazardous materials associated with construction activities, etc.), and operational activities (e.g., transport, use and storage of fuel and herbicides, etc.) are anticipated to be similar for both the Alternative Gen-Tie across BLM Land and the proposed project. Existing residual on-site hazards on the solar generation facility site which present a risk of upset during construction would be the same for both the Alternative Gen-Tie across BLM Land and the proposed project.

Air traffic hazards were evaluated for the proposed project and found not to be an issue. Likewise, the DoD Preliminary Screening Tool shows that Alternative Gen-Tie across BLM Land would not have potential impacts to military airspace (ENValue, 2012, p. 4). Therefore, impacts associated with hazards and hazardous materials would be similar for both the Alternative Gen-Tie across BLM Land and the proposed project.

Hydrology and Water Quality

Impacts to surface water quality from construction activities, increased impervious surfaces, increased drainage rates, and potentially higher levels of contaminants in runoff are anticipated to be similar for both the Alternative Gen-Tie across BLM Land and the proposed project. The same solar generation facility site would be developed for both the Alternative Gen-Tie across BLM Land and the proposed project. Differences in gen-tie configurations between the Alternative Gen-Tie across BLM Land and the proposed project would not drastically change hydrology and water quality impacts. Therefore, impacts to hydrology and water quality would be similar for both the Alternative Gen-Tie across BLM Land and the proposed project.

Biological Resources

The Alternative Gen-Tie across BLM land would result in land disturbance similar to the proposed project. As shown in **Table 6.0-3,** the same area would be disturbed for the solar generation facility component under both the proposed project and the Alternative Gen-Tie across BLM land. Approximately 0.14 acres (7.40 acres minus 7.26 acres) more of temporary disturbance would occur for the proposed project compared to the Alternative Gen-Tie across BLM land.

TABLE 6.0-3
TEMPORARY AND PERMANENT IMPACTS TO VEGETATION COMMUNITIES
PROPOSED PROJECT VS. ALTERNATIVE GEN-TIE ACROSS BLM LAND

Project Component	Temporary Impacts (acres)	Permanent Impacts (acres)
Solar Generation Facility Site	1,852.0	1,852.0
Proposed Gen-Tie		
Off-site Pole Locations (7)	4.02	0.05
Pull-Sites (5)	3.38	0.00
Total	**7.40**	**0.05**
Alternative Gen-Tie Across BLM Land		
Off-site Pole Locations (4)	4.02	0.05
Pull-Sites (5)	3.24	0.00
Total	**7.26**	**0.05**

Source: Heritage, 2012.

Table 6.0-4 shows the vegetation communities that occur within the survey area for the Alternative Gen-Tie across BLM land compared to the proposed project (refer to Attachment 1, Figure 6, of **Appendix J** of this EIR). As shown, impacts to BLM lands would be greater for the proposed project than the Alternative Gen-Tie across BLM land. Conversely impacts to private lands would be greater for the Alternative Gen-Tie across BLM land compared to the proposed project.

TABLE 6.0-4
VEGETATION COMMUNITIES/LAND COVER TYPES
PROPOSED PROJECT VS. ALTERNATIVE GEN-TIE ACROSS BLM LAND

Vegetation Community	Solar Generation Facility Site (Acres)	Proposed Gen-Tie		Alternative Gen-Tie Across BLM Land	
		BLM Land (Acres)	Private Land (Acres)	BLM Land (Acres)	Private Land (Acres)
Active Agriculture (AG-A)	1,677.45	1.49	2.22	0.00	1.40
Fallow Agriculture (AG-F)	123.13	0.79	0.96	0.00	21.50
Arrow Weed Thicket (AS)	0.08	0.41	0.44	--	--
Arrow Weed Thicket – Disturbed (AS-D)	2.19	0.21	0.50	0.00	0.32
Athel Tamarisk Type Woodland (AW)	1.25	0.42	0.52	0.43	0.04
Tamarisk Thicket (TS)	0.40	0.00	0.00	0.00	0.17
Creosote Bush - White Bursage Scrub (CBS)	--	35.14	0.00	22.36	2.03
Creosote Bush - White Bursage Scrub - Disturbed (CBS-D)	--	1.82	2.33	0.60	1.37
Developed (DEV)	0.30	2.19	0.00	2.19	2.13
Open Water with Arrow Weed Thicket (OW)	--	0.71	0.44	0.00	1.34
Stabilized Desert Dunes - Disturbed (SDD-D)	--	22.28	0.00	1.22	0.09
Total Impacts	**1,852.00**	**65.46**	**7.41**	**26.92**	**30.39**

Source: Heritage, 2012; BLM, 2012.

No federally listed, state-listed or BLM sensitive plant species are known or expected to occur within the Alternative Gen-Tie across BLM land based on spring surveys completed for other transmission projects paralleling the IID S-Line route. Spring rare plants are being done in March, April, and possibly May 2012, depending on conditions and guidance from the BLM. Based on survey results from other projects, there are no anticipated impacts to federally listed, state-listed or BLM sensitive plant species if the project uses the Alternative Gen-Tie route.

Abram's spurge (CNPS 2.2), glandular ditaxis (CNPS 2.2), and California ditaxis (CNPS 3.2) have a low potential for occurrence within the Alternative Gen-Tie across BLM land. Rock nettle (CNPS 2.2 and CNDDB special plant), Brown turbans, Parish's desert-thorn and hairy stickleaf (CNPS 2.3 and CNDDB special plants), and Utah vine milkweed (CNPS 4.2) have a low to moderate potential for occurrence. Impacts to these species are not anticipated because they were not observed during surveys and habitat is of low quality. However, if impacts occur, they will be relatively minor based on the small impact areas (7.40 acres of temporary impacts and 0.05 acre of permanent impacts).

Though considered sensitive species, the relatively low ranking status of these species means that any mitigation requirements would be satisfied with mitigation for these species' habitats (e.g., mitigation for the creosote bush–white bursage scrub habitat would mitigate for impacts to the preferred habitats for these species). Species-specific mitigation requirements would not be necessary.

The invertebrates, amphibians, reptiles, birds, and mammals that occur along the Alternative Gen-Tie across BLM land are the same as those described Section 4.12, subsection 4.12.2, General Wildlife.

Thirteen of the fifteen special status wildlife species discussed in Section 4.12, Biological Resources, have the potential to occur along the Alternative Gen-Tie across BLM land (there is no habitat for Yuma

Clapper Rail or barefoot-banded gecko). These species include federally listed species, state listed species, and BLM sensitive species that are known to occur in the Imperial Valley, as well as CDFG species of special concern that were observed during surveys.

There are approximately 1.34 acres of open water with arrow weed thicket and 0.32 acres of arrow weed thicket within the survey area for the Alternative Gen-Tie across BLM land (refer to **Table 6.0-4**).

Impacts to Southwestern Willow Fly Catcher (SWFL) with implementation of the Alternative Gen-Tie across BLM land would generally be the same as that described for the proposed gen-tie in Section 4.12. Suitable migration habitat in the vicinity of the Alternative Gen-Tie across BLM land occurs along the Dixie 3B Drain, approximately 2,000 feet west of the Westside Main Canal crossing associated with this alternative (refer to **Figure 4.12-2c** in Section 4.12). Construction of the Alternative Gen-Tie across BLM land will not directly disturb acreage inside these habitats nor would this alternative be built across any of the drains or wetlands containing potentially suitable migratory habitat for the SWFL. Potential impacts to the SWFL would appear to be limited to the risk that night-migrating SWFL individuals could collide with the gen-tie and temporal displacement of migrant willow flycatchers if construction activities temporarily deter foraging in nearby areas. Therefore, impacts to SWFL would be similar for both the Alternative Gen-Tie across BLM land and the proposed project.

Impacts to Peninsular bighorn sheep would not occur for both the Alternative Gen-Tie across BLM land and the proposed project.

The impacts to Colorado desert fringe-toed lizard resulting from implementation of the Alternative Gen-Tie across BLM land would generally be the same as that described for the proposed gen-tie in Section 4.12, Biological Resources. This alternative may temporarily impact approximately 5.63 acres of suitable Colorado Desert fringe-toed lizard habitat during construction and permanently impact approximately 0.03 acres after construction. The mitigation that will be implemented for FTHL (MM 4.12.10a, MM 4.12.10b and MM 4.12.10c) would also act as mitigation for this species because they use the same habitats. Therefore, impacts to Colorado desert fringe-toed lizard would be similar for both the Alternative Gen-Tie across BLM land and the proposed project.

Impacts to Burrowing Owl (BUOW) resulting from implementation of the Alternative Gen-Tie across BLM land would be similar to but slightly less than that described for the proposed gen-tie in Section 4.12, Biological Resources. Two suitable but unoccupied BUOW burrows were observed within the survey area. Removal of these burrows is not anticipated because they would be spanned by the Alternative Gen-Tie across BLM land. In addition, adjacent suitable foraging habitat for these burrows would not be removed during construction activities. Therefore, impacts to BUOW would be similar for both the Alternative Gen-Tie across BLM land and the proposed project.

Impacts to Mountain Plover, California leaf-nosed bat, and pallid bat resulting from implementation of the Alternative Gen-Tie across BLM land would be similar to those described for the proposed gen-tie in Section 4.12, Biological Resources.

The Alternative Gen-Tie across BLM land would affect small areas of the same habitats as would occur for the proposed gen-tie with regard to California species of special concern and fully protected species. The same mitigation measures used for the proposed gen-tie would be implemented for the Alternative Gen-Tie across BLM land. Therefore, impacts to California Species of special concern and fully protected species resulting from implementation of the Alternative Gen-Tie across BLM land would generally be the same as those described for the proposed Gen-Tie in Section 4.12, Biological Resources.

In contrast to the proposed project (refer to Impact 4.12.12 in Section 4.12, Biological Resources), no impacts to riparian habitat or sensitive natural communities would occur under the Alternative Gen-Tie across BLM land. Thus, impacts to riparian habitat or sensitive natural communities would be better under the Alternative Gen-Tie across BLM land compared to the proposed project.

6.4.2 ALTERNATIVE 2 – PRIVATE LAND GEN-TIE ALTERNATIVE

Characteristics

The Private Land Gen-Tie Alternative would be a single or double-circuit 230 kV interconnection to the Imperial Valley Substation via the Imperial Solar Energy Center West site. This 1.85 mile gen-tie would originate at the western portion of the solar generation facility site (0.1 mile) and extend through approximately 1.75 miles of privately-owned agricultural lands (**Figure 6.0-2**), cross IID's Westside Main Canal, and enter the Imperial Solar Energy Center West site. The Private Land Gen-Tie Alternative includes 15 towers: one on the solar generation facility site and 14 on private land. Rather than construct additional towers on BLM land, this alternative would use available gen-tie capacity on the Imperial Solar Energy Center West's approved gen-tie right-of-way to the Imperial Valley Substation. As such, the Private Land Gen-Tie Alternative would not require an ROW approval from the BLM. Further, no additional disturbance or construction on BLM land would be necessary as this alternative would co-locate on existing Imperial Solar Energy Center West transmission facilities. **Figure 6.0-3** shows the location of the Imperial Solar Energy Center West site and its proposed gen-tie line to the Imperial Valley Substation.

Table 6.0-5 summarizes the assessor's parcel number, acreage and nearest cross street/intersection for the privately owned parcels affected by the Private Land Gen-Tie Alternative.

TABLE 6.0-5
PRIVATELY OWNED PARCELS – PRIVATE LAND GEN-TIE ALTERNATIVE

Assessor's Parcel Number	Acreage	Nearest Cross Street/Intersection
APN 051-290-014	11.0 acres	Jeffrey Road and Dixie Drain 4
APN 051-260-030	7.0 acres	Jeffrey Road and Dixie Drain 4
APN 051-260-029	3.7 acres	Hyde Road and Hardy Road
APN 051-260-033	2.1 acres	Hyde Road and Hardy Road

Source: Imperial County Zoning Maps.

Table 6.0-6 summarizes the Township/Range and Sections for the BLM lands affected by this alternative.

TABLE 6.0-6
DESCRIPTION OF BLM LANDS - PRIVATE LANDS GEN-TIE ALTERNATIVE

Township / Range	Sections
16S 12E	NE ¼ SE ¼ of Section 20
	NW ¼ SE ¼ of Section 20
	SW ¼ NE ¼ of Section 20
	NW ¼ NE ¼ of Section 20
	SE ¼ SW ¼ of Section 17
	SW ¼ SW ¼ of Section 17
	SE ¼ SE ¼ of Section 18
	SW ¼ SE ¼ of Section 18
	SE ¼ SW ¼ of Section 18

Source: BLM, 2012.

Structures and Facilities

More pole structures (15) and associated facilities would be required for the Private Land Gen-Tie Alternative compared to the proposed project (11). Fourteen pole structures are proposed on private lands, and one is proposed on the solar generation facility site. The Imperial Solar Energy Center West site would be needed for this alternative. Some structure locations may need to be cleared of agricultural crops for construction. Three pulling / tensioning sites are expected for this alternative.

Construction Activities

The construction activities for the Private Land Gen-Tie Alternative would be the same as that described for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item D, "Construction Process for the Solar Generation Facility" and subsection 2.1.5, item F, "Construction Process for Gen-Tie."

Operations and Maintenance Activities

The operations and maintenance activities for the Private Land Gen-Tie Alternative would be the same as that described for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item E, "Operations and Maintenance of Solar Generation Facility" and subsection 2.1.5, item H, "Operations and Maintenance of Gen-Tie."

Decommissioning Activities

The decommissioning activities for the Private Land Gen-Tie Alternative would be the same as that described for the proposed project. Refer to Chapter 2.0, subsection 2.1.4, item F, "Decommissioning Plan" and subsection 2.1.5, item I, "Decommissioning and Restoration of Gen-Tie."

Design Features, BMPs, and Other Conditions

The design features for the Private Land Gen-Tie Alternative would be the same as that described for the proposed gen-tie. However, many of the BMPs designed to minimize impacts on desert lands would not be needed here because all lands crossed by the Private Land Gen-Tie Alternative are currently disturbed by agriculture. Refer to Chapter 2.0, subsection 2.1.5, item J, "Design Features and Best Management Practices."

Relationship to Project Objectives

Implementation of the Private Land Gen-Tie Alternative would fulfill the project's objectives to construct a solar generation facility. Development of the project would create a new source of renewable energy on previously disturbed land in a rural setting in proximity to the existing electric transmission system. Likewise, the Private Land Gen-Tie Alternative would support the objective of reducing the emission of GHGs from the generation of electricity. The Private Land Gen-Tie Alternative would allow the Applicant to meet its obligation to meet the terms and requirements of its Power Purchase Agreement which would aid progress in fulfilling the state's RPS and compliance with Executive Order S-14-08 and SB X1-2.

Comparative Impacts

Aesthetics

Under the Private Land Gen-Tie Alternative, the aesthetic condition of the project site would be altered in association with development of a solar generation facility identical to the proposed project. The solar generation facility site would include PV panels, inverters, transformers and a segment of the gen-tie. However, the Private Land Gen-Tie Alternative would include a longer gen-tie overall (1.85 miles) which would be located entirely on private lands. This alternative would require more pole structures than the

proposed project but would avoid adding structures on BLM land. New sources of light or glare for the Private Land Gen-Tie Alternative are anticipated to be similar to the proposed project. Therefore, potential impacts to aesthetics would be similar for both the Private Land Gen-Tie Alternative and the proposed project.

Land Use

The solar generation facility site for the Private Land Gen-Tie Alternative is identical to the proposed project and has an existing General Plan land use designation of "Agriculture" and existing zoning of A-2 - General Agriculture, A-2-R - General Agriculture, Rural Zone, and A-3 - Heavy Agriculture. Like the proposed project, the Private Land Gen-Tie Alternative would require both a Conditional Use Permit (CUP) and a Variance. Potential impacts to land use would be similar under the Private Land Gen-Tie Alternative and the proposed project.

Transportation and Circulation

Short-term construction-related traffic impacts similar to the proposed project would also occur under the Private Land Gen-Tie Alternative with potential for slightly more construction traffic to erect the 1.85 mile long gen-tie. As with the proposed project, impacts to intersections under cumulative conditions could be mitigated with payment of a fair share contribution for improvements. Long-term increases in vehicle traffic related to operation and maintenance of the proposed solar generation facility would be similar for both the Private Land Gen-Tie Alternative and the proposed project under all traffic scenarios modeled (Existing Year 2011 Plus Project Conditions, Year 2013 Conditions Without Project, Year 2013 Plus Project Conditions, Year 2013 Plus Project Plus Cumulative Conditions). However, slightly more traffic would be generated by maintenance trips for the additional towers included as part of the Private Land Gen-Tie Alternative. Overall, potential impacts to traffic and circulation would be similar for both the Private Land Gen-Tie Alternative and the proposed project.

Air Quality

Under the Private Land Gen-Tie Alternative, short-term construction-related air quality impacts would be slightly greater than those of the proposed project in association with the increased length of the gen-tie (1.85 miles compared to 1.4 miles for the proposed project). Emissions of NOx and PM_{10} would be generated during construction in association with site preparation, equipment and vehicle exhaust. Similar exposure of sensitive receptors would occur for both the Private Land Gen-Tie Alternative and the proposed project but impacts would be mitigated through T-BACT and measures to reduce NOx and PM_{10}. Vehicle trips associated with operation and maintenance would also be slightly more for the Private Land Gen-Tie Alternative compared to the proposed project because several more towers would require maintenance. Therefore, potential impacts to air quality would be slightly worse for the Private Land Gen-Tie Alternative compared to the proposed project.

Climate Change and Greenhouse Gases

Short-term construction-related greenhouse gas/climate impacts are anticipated to be similar for both the Private Land Gen-Tie Alternative and the proposed project. The Private Land Gen-Tie Alternative has the potential for slightly higher emissions if additional vehicle trips are required to support construction of the longer length of the gen-tie under this alternative. Potential operational greenhouse gas/climate change impacts as a result of increased vehicle emissions would be slightly higher because the gen-tie for the Private Land Gen-Tie Alternative is almost twice the length of the proposed project's gen-tie. Additional traffic may be generated in association with maintenance of additional pole structures required for the longer gen-tie under this alternative. Therefore, greenhouse gas/climate change

impacts are anticipated to slightly worse for the Private Land Gen-Tie Alternative compared to the proposed project.

Geology and Soils

The solar generation facility site would be identical for both the proposed project and the Private Land Gen-Tie Alternative and thus would be exposed to similar geologic and seismic hazards as the proposed project (seismic exposure, liquefaction, expansive soils, erosion, and corrosive soils). However the gen-tie component of the Private Land Gen-Tie Alternative includes several more towers than the proposed project and thus would potentially be exposed to more damage associated with geology and soils. Therefore, geology and soils impacts would be worse for the Private Land Gen-Tie Alternative compared to the proposed project.

Cultural and Paleontological Resources

Cultural resource impacts associated with potential disturbance of undiscovered resources is expected to be the similar for both the Private Land Gen-Tie Alternative and the proposed project. The solar generation facility site (i.e. foundations installation, etc) for the Private Land Gen-Tie Alternative would be the same as the proposed project. Table 4.7-2 in Section 4.7 identifies eight of the previously recorded cultural resources are within the project study area. **Table 6.0-7** shows two additional resources that were identified specific to the Private Land Gen-Tie Alternative.

TABLE 6.0-7
PREVIOUSLY RECORDED CULTURAL RESOURCES IN THE PROJECT AREA

Site Number	Type	Age	Location	Comment
CA-IMP-7834	Westside Main Canal	Historic	Private Land Gen-Tie Alternative	Part of the All-American Canal System
P-13-012690	Portion of Forget-Me-Not Canal	Historic	Private Land Gen-Tie Alternative	Part of the All-American Canal System

Source: SCIC, 2011.
Key to Site numbers: Site numbers beginning with P- are Primary numbers assigned by the SCIC; Site numbers beginning with CA-IMP- are Trinomial numbers assigned by the SCIC.

The field surveys identified 29 cultural resources more than 50 years old in the project area including 7 historic period water conveyance facilities (canals, drains, and ditches), 10 historical buildings, one historic archaeological site (CA-IMP-11758), as well as 11 isolates (1 or 2 artifacts each) shown in Table 4.7-2 in Section 4.7. In addition, **Table 6.0-8** summarizes the water conveyance facilities, and isolated finds (isolates) that are located along the Private Land Gen-Tie Alternative.

TABLE 6.0-8
CULTURAL RESOURCES IDENTIFIED FOR THE PRIVATE LAND GEN-TIE ALTERNATIVE

Site Number	Description	Resource Type	Age	Location
CA-IMP-7834	Westside Main Canal and Westside Drain	Structure/Facility	Historic	Private Land Gen-Tie Alternative
CA-IMP-8821	Foxglove Canal	Structure/Facility	Historic	Private Land Gen-Tie Alternative
P-13-012688	Dixie Drains 2, 3, & 4, Dixie Lateral 1 (portions)	Structure/Facility	Historic	Private Land Gen-Tie Alternative
MS 11 (Isolate)	Isolate purple glass	Isolate	Historic	Private Land Gen-Tie Alternative

Source: Mitchell, 2011.
Key to Site numbers: Site numbers beginning with P- are Primary numbers assigned by the SCIC; Site numbers beginning with CA-IMP- are Trinomial numbers assigned by the SCIC; Site numbers beginning with MS- are temporary numbers assigned by kp environmental, the project cultural resources consultant.

The Westside Main Canal system (CA-IMP-7834), including the canal, lateral, and Westside Drain segments is in the project area (in the solar generation facility site, the proposed gen-tie, and the Private Land Gen-Tie Alternative) and is eligible for the CRHR under Criterion 1 for its significance in the agricultural and economic development of the Imperial Valley. However, the Private Land Gen-Tie Alternative would also potentially impact two additional historic facilities (CA-IMP-8821 and P-13-012688) as well as an isolate (MS 11). Therefore, impacts to cultural resources for the Private Land Gen-Tie Alternative would be considered worse than for the proposed project.

Noise

Short-term construction-related noise impacts are anticipated to be similar for both the Private Land Gen-Tie Alternative and the proposed project. However, the area in which the noise impacts would occur would cover a larger area since the Private Land Gen-Tie Alternative is longer (1.85 miles) than the proposed project (1.4 mile). Operational traffic noise and stationary noise impacts are anticipated to be similar, though the Private Land Gen-Tie Alternative would involve more gen-tie structures than the proposed project. Therefore, noise impacts would be worse for the Private Land Gen-Tie Alternative compared to the proposed project.

Agricultural Resources

Both the Private Land Gen-Tie Alternative and the proposed project would convert the project site from agricultural uses to a solar generation facility. Similar impacts to agricultural resources would occur in association with the Private Land Gen-Tie Alternative and the proposed project. However, slightly more agricultural land would be permanently impacted by placement of gen-tie pole structures (0.11 acre) for the Private Land Gen-Tie Alternative compared to the proposed project (0.08 acre). Therefore impacts to agricultural resources would be slightly worse under the Private Land Gen-Tie Alternative compared to the proposed project.

Hazardous and Hazardous Materials

Risks associated with site hazards, including construction activities and conditions (e.g., soil disturbance, use of hazardous materials associated with construction activities), and operational activities (e.g., transport, use and storage of fuel and herbicides) are anticipated to be similar for both the Private Land Gen-Tie Alternative and the proposed project. Existing residual on-site hazards located on the solar

generation facility site which present a risk of upset during construction would be the same for both the Private Land Gen-Tie Alternative and the proposed project.

Air traffic hazards were evaluated for the proposed project and found to not be an issue. The DoD Preliminary Screening Tool results for the Private Land Gen-Tie Alternative suggested additional consultation with the local military installation to determine whether impacts could occur. The DoD has been contacted but has not yet provided additional information (ENValue, 2012, p. 4). Thus, hazard impacts for the Private Land Gen-Tie Alternative could potentially be worse than would occur for the proposed project.

Hydrology and Water Quality

Impacts associated with surface water quality from construction activities, increased impervious surfaces, increased drainage rates, and potentially higher levels of contaminants in runoff are anticipated to be similar for both the Private Land Gen-Tie Alternative and the proposed project. The same solar generation facility site would be developed for both the Private Land Gen-Tie Alternative and the proposed project with on-site detention and retention basins. The increase in gen-tie towers on private lands (14 towers) associated with the Private Land Gen-Tie Alternative compared to the proposed project (0 towers) is not anticipated to drastically change hydrology and water quality impacts. Therefore, impacts to hydrology and water quality would be similar for both the Private Land Gen-Tie Alternative and the proposed project.

Biological Resources

The Private Land Gen-Tie Alternative would result in land disturbance similar to the proposed project on the solar generation facility site. As shown in **Table 6.0-9,** the same area would be disturbed for the solar generation facility component under both the proposed project and the Private Land Gen-Tie Alternative. Approximately 3.85 acres (11.25 acres minus 7.40 acres) more of temporary disturbance would occur for the Private Land Gen-Tie Alternative compared to the proposed project.

TABLE 6.0-9
PROPOSED IMPACTS FOR THE CAMPO VERDE SOLAR PROJECT

Project Component	Temporary Impacts (acres)	Permanent Impacts (acres)
Solar Generation Facility Site	1,852.0	1,852.0
Proposed Gen-Tie		
Off-site Pole Locations (7)	4.02	0.05
Pull-Sites (4)	3.38	0.00
Total	**7.40**	**0.05**
Private Land Gen-Tie Alternative		
Off-site Pole Locations (14)	8.04	0.10
Pull-Sites (5)	3.21	**0.00**
Total	**11.25**	**0.10**

Source: Campo Verde Solar, LLC.

Table 6.0-10 shows the vegetation communities that occur within the survey area for the Private Land Gen-Tie Alternative compared to the proposed project (refer to Attachment 1, Figure 6, of **Appendix J** of this EIR). As shown, there would be no impacts to BLM lands for the Private Land Gen-Tie Alternative

compared to the proposed project. Conversely, impacts to private lands would be much greater (123.61 acres) for the Private Land Gen-Tie Alternative compared to the proposed project (7.41 acres).

TABLE 6.0-10
VEGETATION COMMUNITIES/LAND COVER TYPES
PROPOSED PROJECT VS. PRIVATE LAND GEN-TIE ALTERNATIVE

Vegetation Community	Solar Generation Facility Site (Acres)	Proposed Gen-Tie		Private Land Gen-Tie Alternative
		BLM Land (Acres)	Private Land (Acres)	Private Land (Acres)
Active Agriculture (AG-A)	1,677.45	1.49	2.22	112.26
Fallow Agriculture (AG-F)	123.13	0.79	0.96	4.04
Arrow Weed Thicket (AS)	0.08	0.41	0.44	0.83
Arrow Weed Thicket – Disturbed (AS-D)	2.19	0.21	0.50	--
Athel Tamarisk Type Woodland (AW)	1.25	0.42	0.52	0.27
Common Reed Marsh – Disturbed (CRM-D)	--	--	--	0.50
Disturbed Wetland	--	--	--	1.11
Creosote Bush - White Bursage Scrub (CBS)	--	35.14	0.00	--
Creosote Bush - White Bursage Scrub - Disturbed (CBS-D)	--	1.82	2.33	--
Developed (DEV)	0.30	2.19	0.00	3.35
Open Water with Arrow Weed Thicket (OW)	--	0.71	0.44	1.25
Stabilized Desert Dunes - Disturbed (SDD-D)	--	22.28	0.00	--
Total Impacts	**1,852.00**	**65.46**	**7.41**	**123.61**

Source: Heritage 2012; BLM, 2012.

There are no suitable habitats for special status species along the Private Land Gen-Tie Alternative. Likewise, no special status or priority plant species are expected to occur within the Private Land Gen-Tie Alternative survey area. Therefore, no impacts to special status or priority plant species are expected to occur as a result of project implementation.

The invertebrates, amphibians, reptiles, birds, and mammals that occur along this gen-tie alternative are the same as those described Section 4.12, subsection 4.12.2, General Wildlife. No reptile species were observed in the survey area for this alternative.

Eleven of the fifteen special status wildlife species discussed in Section 4.12, Biological Resources, have the potential to occur along the proposed gen-tie. These species include federally listed species, state listed species, and BLM sensitive species that are known to occur in the Imperial Valley, as well as CDFG species of special concern that were observed during surveys.

Special status wildlife species with no habitat in the Private Land Gen-Tie Alternative survey area include Peninsular bighorn sheep, barefoot-banded gecko, flat-tailed horned lizard, or Colorado desert fringe-toed lizard. Impacts to these species would not occur because there is no suitable habitat to support Peninsular bighorn sheep, barefoot-banded gecko, flat-tailed horned lizard, or Colorado desert fringe-toed lizard in the Private Gen-Tie Alternative survey area.

There are approximately 0.83 acres of arrow weed thicket and approximately 1.25 acres of open water with arrow weed thicket near the west end of the Private Land Gen-Tie Alternative. The Proposed Gen-

Tie would temporarily impact 0.44 acre of arrow weed thicket and 0.44 acre of open water with arrow weed thicket. This is less than would be disturbed by the Private Land Gen-Tie Alternative. However, the Private Land Gen-Tie Alternative would also entirely avoid impacts to 0.41 acre of arrow weed thicket and 0.71 acre of open water with arrow weed thicket.

Impacts to Southwestern Willow Fly Catcher (SWFL) with implementation of the Private Gen-Tie Alternative would generally be the same as those described for the proposed gen-tie in Section 4.12. Suitable migration habitat in the vicinity of the Private Land Gen-Tie Alternative occurs along the Dixie 3B Drain, approximately 2,000 feet west of the Westside Main Canal crossing associated with this alternative (refer to **Figure 4.12-2a** in Section 4.12). Construction of the Private Gen-Tie Alternative will not directly disturb acreage inside these habitats, but the Private Gen-Tie Alternative would be built across this habitat. Potential impacts to the SWFL would be limited to the risk of night-migrating SWFL individuals colliding with the gen-tie. Likewise, temporal displacement of migrant willow flycatchers could occur if nearby construction activities temporarily deter foraging. Therefore, impacts to this species would be similar for both the Private Gen-Tie Alternative and the proposed project.

Construction of the Private Gen-Tie Alternative is not likely to have an effect on YCR individuals. The nearest known occurrence of nesting YCR is approximately 1.8 miles east of the project area. However, there is no suitable nesting habitat in the survey area. There is a potential for YCR to forage or winter in the habitat associated with Dixie Drain 4 and Westside Drain (refer to **Figure 4.12-2a** in Section 4.12**)**. Noise from equipment during construction would have a low probability of temporarily impacting YCR given the low potential for this species to occur within the Private Gen-Tie Alternative area. The O&M activities associated with the Private Gen-Tie Alternative are not expected to affect YCR. Any noise during operations will be minimal and the level of human disturbance is not expected to increase significantly above the level associated with agricultural practices that are currently taking place and will continue to take place. Therefore, impacts to this species would be similar for both the Private Gen-Tie Alternative and the proposed project.

Greater Sandhill Cranes may forage during the winter in the active agricultural habitats adjacent to the Private Gen-Tie Alternative corridor. Approximately 0.4 acres of agricultural land would be affected by implementation of the Private Gen-Tie Alternative. Given that all of the agricultural lands in Imperial County provide potentially suitable foraging habitat for this species, including lands in the vicinity of the Private Gen-Tie Alternative, it is unlikely that the loss of this small amount of potentially suitable foraging habitat would impact wintering Greater Sandhill Cranes. Noise from heavy equipment during construction is not expected to adversely modify the behavioral patterns of foraging Sandhill Cranes because the vast amount of foraging habitat in the vicinity will allow them to use the area. The Sandhill Crane is a diurnal species and is not expected to be active at night. Because the Sandhill Crane is relatively tolerant of disturbance on its wintering grounds, the brief periods when they may forage within any given field in the vicinity of the proposed project disturbance to Sandhill Cranes from noise would be unlikely. Sandhill Cranes are only active during daylight hours, and no collisions with the Private Gen-Tie Alternative are anticipated, as they will be visible and avoidable. Therefore, impacts to this species would be similar for both the Private Gen-Tie Alternative and the proposed project.

Impacts to Burrowing Owl (BUOW) resulting from implementation of the Private Gen-Tie Alternative would generally be the same as that described for the proposed gen-tie in Section 4.12. Three suitable but unoccupied Burrowing Owl burrows were observed within the survey area for this alternative. Removal of these burrows would not occur because these burrows would be spanned by the Private Gen-Tie Alternative. In addition, adjacent suitable foraging habitat for these burrows would not be removed to accommodate construction activities. No impacts to BUOW would occur during operation

and maintenance activities because existing farm roads adjacent to the gen-tie would be used. Mitigation measures MM 4.12.6a and MM 4.12.6b would be implemented to ensure impacts would be minor. Therefore, impacts to BUOW would be similar for both the Private Gen-Tie Alternative and the proposed project.

The Private Gen-Tie Alternative traverses suitable habitat for the Mountain Plover. However, this species does not nest within the project area or in the Imperial Valley. Approximately 0.4 acres of agricultural land would be affected by implementation of the Private Gen-Tie Alternative. Given that all of the agricultural lands in Imperial County provide potentially suitable foraging habitat for Mountain Plover, including agricultural land in the vicinity of the Private Gen-Tie Alternative, it is unlikely that the loss of this small amount of potentially suitable foraging habitat would impact wintering Mountain Plovers. This species is protected under the MBTA. Avian predators such as ravens (genus *Corvus*), Loggerhead Shrikes (*Lanius ludovicianus*), and Prairie Falcon (*Falco mexicanus*) may be drawn to the area due to the increase in nesting/perching areas such as gen-tie structures. This potential increase in avian predators could potentially indirectly affect Mountain Plover within the vicinity of the Private Gen-Tie Alternative. No indirect effects to Mountain Plover due to herbicide use are anticipated.

The impacts to California leaf-nosed bat and pallid bat resulting from implementation of the Private Gen-Tie Alternative would be similar to that described for the proposed gen-tie in Section 4.12.

The impacts to California species of special concern and fully protected species resulting from implementation of Private Gen-Tie Alternative would generally be the same as that described for the proposed gen-tie in Section 4.12.

In contrast to the proposed project (refer to Impact 4.12.12 in Section 4.12, Biological Resources), no impacts to riparian habitat or sensitive natural communities would occur under the Alternative Gen-Tie Across BLM land. Thus, impacts to riparian habitat or sensitive natural communities would be better under the Private Gen-Tie Alternative land compared to the proposed project.

6.4.3 ALTERNATIVE 3 - NO PROJECT ALTERNATIVE

Alternative 3 is the No Project Alternative. Analysis of the No Project Alternative is required by CEQA Guidelines Section 15126.6(e)(1). The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. This alternative considers the circumstance under which the project does not proceed. This discussion analyzes the impacts of the No Project Alternative by projecting what can reasonably be expected to occur in the foreseeable future if the project were not approved, as compared to the proposed project. For the purposes of this analysis, the No Project Alternative assumes that the project site would continue to remain in agricultural uses and that the proposed solar generation facility would not be built on the site. Likewise, the proposed gen-tie would not be constructed.

Characteristics

Under the No Project Alternative, the Campo Verde Solar Project would not be constructed. The project site would remain in its existing state as active agricultural fields, canals, and drains (refer to Figure 2.0-2, Aerial of Project site). No CUP or variance would be necessary from the County. Likewise, no encroachment permits from the IID would be required.

Relationship to Project Objectives

Implementation of the No Project Alternative would fail to fulfill the project's objectives to develop a solar generation facility. Failure to construct the project would forego development of a new source of renewable energy and forfeit locating a project of this size on previously disturbed land in a rural setting in proximity to the existing electric transmission system.

Continued use of the site for agricultural production would not support the objective of reducing the emission of GHGs from the generation of electricity. The Applicant would not be able to meet its obligation to meet the terms and requirements of its Power Purchase Agreement which would ultimately slow progress in fulfilling the state's RPS and compliance with Executive Order S-14-08 and SB X1-2. Therefore, the No Project Alternative would not achieve the objectives of the proposed project.

Comparative Impacts

Aesthetics

Under the No Project Alternative, the aesthetic condition of the project site would remain as it currently exists. Alteration of the site from agricultural fields to a solar generation facility would not occur. Likewise, no new sources of light or glare would be introduced to the site. This alternative would not change existing views or create new sources of light and glare. Therefore, potential impacts to aesthetics would be better under the No Project Alternative compared to the proposed project.

Land Use

The site has an existing General Plan land use designation "Agriculture" and an existing zoning of A-2 - General Agriculture, A-2-R - General Agriculture, Rural Zone, and A-3 - Heavy Agriculture. No development would occur in association with the No Project Alternative. The proposed project would require both a Conditional Use Permit (CUP) and a Variance. Under the No Project Alternative, no CUP or Variance would be required. Potential impacts to land use would be better under the No Project Alternative compared to the proposed project.

Transportation and Circulation

Short-term construction-related traffic impacts would not occur under the No Project Alternative. Long-term increases in vehicle traffic related to operation and maintenance of the proposed solar generation facility would also not occur under the No Project Alternative. Surrounding roads would continue to be used for traffic generated by agricultural uses with no major changes in volumes or patterns. Therefore, potential impacts to traffic and circulation would be better under the No Project Alternative compared to the proposed project.

Air Quality

Under the No Project Alternative, short-term construction-related air quality impacts would not occur. Likewise, vehicle trips associated with operation and maintenance would also be avoided. However, operational air quality impacts associated with use of the site for agricultural production would continue. Generation of fugitive dust from tilling the site and mobile source emissions from farm equipment used to apply chemicals and harvest crops would still occur. Far lower operational emissions would occur if the proposed project were developed. Therefore, the long-term air quality impacts would be better if the proposed project were implemented compared to the No Project Alternative.

Climate Change and Greenhouse Gases

Short-term construction-related greenhouse gas/climate impacts would not occur under the No Project Alternative. Likewise, operational greenhouse gas/climate change impacts generated by operations and maintenance vehicle trips as a result of increased vehicle emissions would not occur under the No Project Alternative. However, use of the site for agricultural production would result in the continued generation of greenhouse gases from operation of farm equipment and use of water to irrigate the agricultural fields. No such long-term impacts would be associated with the proposed solar generation facility. Therefore, greenhouse gas/climate change impacts would be better if the proposed project were implemented compared to the No Project Alternative.

Geology and Soils

Under the No Project Alternative, no structures would be built on the solar generation facility site and no gen-tie structures would be constructed. Therefore, impacts associated with geologic hazards would remain the same as under existing conditions. Continued use of the site for agricultural production could result in some soil erosion that would be avoided under the proposed project. However, under this alternative, there would be no change from existing conditions. Therefore, impacts to geology and soils would be better under the No Project Alternative compared to the proposed project.

Cultural and Paleontological Resources

Cultural resource impacts associated with potential disturbance of undiscovered resources would not occur under the No Project Alternative. Construction activities required to install the project (i.e. foundations installation, etc) would not occur. The upper portions of the soil profile where past disturbance already has occurred would continue in association with current agricultural practices. Therefore, potential impacts to cultural resources would be better under the No Project Alternative than under the proposed project.

Noise

Short-term construction-related noise impacts would not occur under the No Project Alternative. Additionally, operational traffic noise and stationary noise impacts would not occur with the No Project Alternative. Ambient noise levels are anticipated to remain unchanged in association with continued agricultural practices on the project site. Therefore, noise impacts would be better under the No Project Alternative than under the proposed project.

Agricultural Resources

The No Project Alternative would result in continued use of the site for agricultural production. No impacts to agricultural resources would occur in association with this alternative, as the site would not be converted from agriculture to accommodate construction of the proposed project. Therefore impacts to agricultural resources would be better under the No Project Alternative as compared to the proposed project. This alternative would have no impact on agricultural resources.

Hazardous Materials/Risk of Upset

Risks associated with site hazards, including construction activities and conditions (e.g., soil disturbance, use of hazardous materials associated with construction activities), and operational activities (e.g., transport, use and storage of fuel and herbicides) would not occur under the No Project Alternative. As no construction site preparation or construction activities would be required, no risk of upset of residual hazardous materials on the project site would occur. Continued use of the site for agricultural

production would result in the on-going use of pesticides and herbicides, which would not occur with implementation of the proposed project. Existing regulations in place for the use of pesticides and herbicides would ensure that significant hazardous material impacts would not occur. Therefore, potential impacts to hazardous materials/risk of upset would be better under the No Project Alternative than the proposed project.

Hydrology and Water Quality

Impacts associated with surface water quality from construction activities, increased impervious surfaces, increased drainage rates, and potentially higher levels of contaminants in runoff would not occur under the No Project Alternative. Continued use of the site for agricultural production would result in runoff contaminated with agricultural pollutants, such as herbicides and pesticides. Therefore, impacts to hydrology and water quality would be better under the No Project Alternative compared to the proposed project.

Biological and Natural Resources

The No Project Alternative would result in the project site remaining in its current agriculture use. Impacts to biological resources such as Southwestern Willow Flycatcher, Burrowing Owl, raptors, Mountain Plover, and nesting migratory birds would be avoided under the No Project Alternative as no change from existing conditions would occur. Therefore, impacts to biological resources would be better under the No Project Alternative as compared to the proposed project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based upon the evaluation described in this section, the No Project Alternative (Alternative 3) is considered to be the environmentally superior alternative, as it would avoid all adverse impacts associated with the proposed project. The No Project Alternative was determined to have less adverse environmental impacts than the proposed project on most issues overall. However, the No Project Alternative would have a greater impact on air quality and climate change/greenhouse gases than would the proposed project, specifically with regard to continued agricultural dust and equipment emissions and continued reliance on fossil fuels for electricity rather than renewable energy created by the proposed project.

Under CEQA Guidelines Section 15126.6 (e)(2), if the environmentally superior alternative is the No Project Alternative, another environmentally superior alternative must be selected from the other alternatives analyzed. For this analysis, after the No Project Alternative, Alternative 1, the Alternative across BLM land is considered the environmentally superior alternative as it would obtain the objectives of the proposed project. Overall, the Alternative across BLM land would have similar impacts as the proposed project with better, less intense/extensive impacts to several issues (transportation and traffic, air quality, climate change and greenhouse gases, geology and soils) because fewer towers would be constructed and require maintenance. The Alternative across BLM land (Alternative 1) was determined to have less adverse environmental impacts than the proposed project on most issues overall.

Table 6.0-11, below, provides a summary of the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the proposed project.

TABLE 6.0-11
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ISSUE AREA/IMPACT	ALTERNATIVE GEN-TIE ACROSS BLM LAND	PRIVATE LAND GEN-TIE ALTERNATIVE	NO PROJECT ALTERNATIVE
AESTHETICS			
Impact 4.1.1 Adverse Effect on Scenic Vista	S	S	B
Impact 4.1.2 Degrade Existing Visual Character or Quality of the Site	S	S	B
Impact 4.1.3 New Source of Substantial Light or Glare	S	S	B
Impact 4.1.4 Cumulative Visual Impacts	S	S	B
LAND USE			
Impact 4.2.1 Conflict With Any Applicable Land Use Plan, Policy, or Regulation	S	S	B
Impact 4.2.2 Cumulative Land Use Impacts	S	S	B
Impact 4.2.3 Land Use Conflicts	S	S	B
TRANSPORTATION AND CIRCULATION			
Impact 4.3.1 Impacts to Intersection, Roadway and Freeway Segment LOS (Year 2011 Plus Project)	B	W	B
Impact 4.3.2 Impacts to Intersection, Roadway and Freeway Segment LOS (Year 2013)	B	W	B
Impact 4.3.3 Cumulative Impacts to Intersection, Roadway and Freeway Segment LOS (Year 2013)	B	W	B
AIR QUALITY			
Impact 4.4.1 Conflict with or Obstruct Air Quality Plan/Violate Air Quality Standard	B	S	W
Impact 4.4.2 Expose Sensitive Receptors to Substantial Pollutant Concentrations	S	S	B
Impact 4.4.3 Violate Air Quality Standard/Cause Air Quality Violation	S	S	W
Impact 4.4.4 Cumulative Substantial Pollutant Concentrations	S	S	W
CLIMATE CHANGE AND GREENHOUSE GASES			
Impact 4.5.1 Generation of Greenhouse Gas Emissions	B	S	W
Impact 4.5.2 Conflict with an Applicable Plan, Policy, or Regulation Adopted to Reduce Greenhouse Gas Emissions	S	S	S
GEOLOGY AND SOILS			
Impact 4.6.1 Strong Seismic Ground Shaking	B	W	B
Impact 4.6.2 Liquefaction/Unstable Soils	B	W	B

TABLE 6.0-11
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ISSUE AREA/IMPACT	ALTERNATIVE GEN-TIE ACROSS BLM LAND	PRIVATE LAND GEN-TIE ALTERNATIVE	NO PROJECT ALTERNATIVE
Impact 4.6.3 Erosion	B	W	B
Impact 4.6.4 Expansive Soils	B	W	B
Impact 4.6.5 Soil Capability to Support Septic Systems	S	S	B
Impact 4.6.6 Soil Corrosivity	B	W	B
Impact 4.6.7 Cumulative Geology and Soils Impacts	B	W	B
CULTURAL RESOURCES			
Impact 4.7.1 Changes in Setting to the Westside Main Canal System	S	W	B
Impact 4.7.2 Impact to Archaeological Site CA-IMP-11758	S	S	B
Impact 4.7.3 Impacts to Unrecorded Subsurface Archaeological Resources	S	S	B
Impact 4.7.4 Impacts to Subsurface Human Remains	S	S	B
Impact 4.7.5 Impacts to Fossil Remains	S	S	B
Impact 4.7.6 Cumulative impacts to Archaeological and Historic Resources	S	S	B
Impact 4.7.7 Cumulative Impacts to Paleontological Resources	S	S	B
NOISE			
Impact 4.8.1 Noise Levels in Excess of Standards/Substantial Temporary Noise Increase	S	S	B
Impact 4.8.2 Noise Levels in Excess of Standards/Substantial Permanent Noise Increase	S	S	B
Impact 4.8.3 Cumulative Noise Increases	S	S	B
AGRICULTURAL RESOURCES			
Impact 4.9.1 Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance	S	S	B
Impact 4.9.2 Conversion of Farmland	S	S	B
Impact 4.9.3 Cumulative Agricultural Resources Impacts	S	S	B
HAZARDS AND HAZARDOUS MATERIALS			
Impact 4.10.1 Hazardous Materials Transport, Use, Disposal and Accidental Release	S	S	B
Impact 4.10.2 Hazard Through Upset/Release of Hazardous Materials	S	S	B

TABLE 6.0-11
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ISSUE AREA/IMPACT	ALTERNATIVE GEN-TIE ACROSS BLM LAND	PRIVATE LAND GEN-TIE ALTERNATIVE	NO PROJECT ALTERNATIVE
Impact 4.10.3 Emit Hazardous Emissions	S	S	B
Impact 4.10.4 Cumulative Hazards and Hazardous Materials Impact	S	S	B
HYDROLOGY AND WATER QUALITY			
Impact 4.11.1 Violate Water Quality Standards or Waste Discharge Requirements	S	S	B
Impact 4.11.2 Result in Substantial Erosion or Siltation On- or Off-site	S	S	B
Impact 4.11.3 Result in Substantial Flooding On- Or Off-Site/Create or Contribute Runoff Exceeding Capacity	S	S	B
Impact 4.11.4 Cumulative Impact to Hydrology and Water Quality	S	S	B
BIOLOGICAL RESOURCES			
Impact 4.12.1 Impacts to Special-Status Species – Plants	S	S	B
Impact 4.12.2 Impacts on Special Status Species – Birds (Southwestern Willow Flycatcher)	S	S	B
Impact 4.12.3 Impacts on Special Status Species – Birds (Yuma Clapper Rail)	S	S	B
Impact 4.12.4 Impacts on Special Status Species – Birds (Greater Sandhill Crane)	S	S	B
Impact 4.12.5 Impacts on Special Status Species – Birds (Mountain Plover)	S	S	B
Impact 4.12.6 Impacts on Special Status Species – Raptors (Burrowing Owls)	S		B
Impact 4.12.7 Impacts on Special Status Species – Raptors (Golden Eagles)	S	S	B
Impact 4.12.8 Impacts to Nesting Raptors	S	S	B
Impact 4.12.9 Impacts on Special Status Species – Mammals (Pallid Bats and California Leaf-nosed Bats)	S	S	B
Impact 4.12.10 Impacts on Special Status Species – Reptiles (Flat tailed horned lizard)	S	B	B
Impact 4.12.11 Impacts on Special Status Species – Reptiles (Colorado desert fringe-toed lizard)	S	B	B
Impact 4.12.12 Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community	S	B	B
Impact 4.12.13 Substantial Adverse Effect on Federally Protected Wetlands	S	B	B
Impact 4.12.14 Interfere with Migratory Fish or Wildlife Movement/Impede the Use	S	S	B

TABLE 6.0-11
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ISSUE AREA/IMPACT	ALTERNATIVE GEN-TIE ACROSS BLM LAND	PRIVATE LAND GEN-TIE ALTERNATIVE	NO PROJECT ALTERNATIVE
of Native Wildlife Nursery Sites			
Impact 4.12.15 Conflict with Local Policies or Ordinances Protecting Biological Resources	**S**	**S**	**B**
Impact 4.12.16 Conflict with the Provisions of a Habitat Conservation Plan	**S**	**B**	**B**
Impact 4.12.17 Cumulative Impacts to Biological Resources	**S**	**B**	**B**

Notes: S = Similar Impact compared to the Proposed Project
B = Better Impact compared to the Proposed Project
W = Worse Impact compared to the Proposed Project.

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