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Visual Resources Report
Tierra del Sol Solar Farm Project
Major Use Permit 3300-12-010;
Rezone 3600-12-005
Environmental Review Project Number 3910-120005
Boulevard, San Diego County, California

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1.0 INTRODUCTION

1.1 Purpose

This visual resources report analyzes the potential effects of the Tierra del Sol Solar Farm Project (Project) on visual resources in accordance with the California Environmental Quality Act (CEQA). This report also proposes measures to avoid, minimize, or mitigate adverse visual impacts that may be associated with construction and operation of the proposed project on the surrounding visual environment.

1.2 Visual Resource Concepts and Terminology

Visual Resource Assessment

For purposes of this study, visual resources are defined as the various elements and features of the landscape that contribute to the visual character of a particular setting. Natural and man-made elements and features are considered visual resources as are objects, vistas and viewsheds. A visual resource assessment typically begins with fieldwork and an inventory of the existing visual resources and conditions of a particular site. In generally, a visual resource assessment includes the following processes:

- inventory and describe the existing visual quality, character and visual resources of the project site and surrounding viewshed area;
- identify visually sensitive resources;
- identify sensitive viewers and representative viewpoints (also known as key observation points) to the project site – representative viewpoints are used in the visual assessment to document the anticipated level of visual change occurring in the area as a result of the project in question.
- analyze the anticipated effects on visual resources occurring as a result of the proposed project;
- if effects will be significant, identify appropriate mitigation measures to avoid or reduce these effects.

The process described above is based on the Federal Highway Administration (FHWA) assessment method and is consistent with the County of San Diego Report Format and Content Requirements for Visual Resources. The intent of the process outlined above is the measurement of the aesthetic value of an area according to visual character, quality and viewer response to a

particular visual resource change represented by the project. These concepts and other key issues discussed in this visual resource assessment are described below.

Visual Character

The descriptive attributes of a landscape (including natural and man-made features) contribute to the visual character of an area or a view. Influenced by geologic, hydrologic, botanical, and recreational features as well as by roads, structures, utilities and other urban features, the perception of visual character can vary according to season and time of day as the elements that comprise the viewshed (i.e., weather, light, and shadow) fluctuate over time and work to either obscure or highlight particular features. The fundamental pattern elements used to describe visual character are form (bulk, mass, size and shape), line, color, and texture and the appearance of a landscape is often described according to the dominance of these elements. For example, the geometric lines and vertical forms of an urban setting can dominate the visual landscape and produce very little contrast in terms of color and texture. On the other hand, a natural setting comprised of rolling hills, rough textured vegetation, flat, rolling and rugged forms, and earth tone colors could contribute to a visual character in which none of the pattern elements is particularly dominant. However, in absence of viewer response to change in the environment, neither landscape is considered to have greater or higher visual character.

Visual Quality

Visual quality is evaluated according to the vividness, intactness and unity present in the viewshed as modified by public judgment/viewer sensitivity. The three criteria used to evaluate visual quality are defined as follows:

- *Vividness* is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- *Intactness* is the visual integrity of the natural and built landscape and its freedom from encroaching elements. Intactness can be present in developed urban and rural landscapes, as well as in natural settings.
- *Unity* is the visual coherence and compositional harmony of the landscape considered as a whole. Unity frequently attests to the careful design of individual built components in the landscape.

While high quality views are highly vivid, mostly intact, and are highly coherent and exhibit visual continuity, low quality views are not particular memorable and contain numerous contrasting and encroaching elements that contribute to weak visual unity.

Viewshed

The project viewshed is comprised of all surface areas from which views of project components would be visible. In addition, the viewshed includes the location of viewers likely to be affected by visual changes brought about by project features. For purposes of this analysis, the viewshed depicted in report graphics does not consider the screening effect of existing vegetation and structures from viewpoints; rather, incidents of screening associated with vegetation and structures are discussed in the text.

Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the viewers might react to visual changes brought about by a project. The concepts of viewer sensitivity and viewer exposure are described below.

Viewer Sensitivity

Visual sensitivity is described in qualitative terms of high, medium, or low and is based on user volume and attitudes toward changes to the visual environment. Factors considered include the number and types of viewers potentially affected, viewing distances, and documented public concerns about visual changes.

Viewer Exposure

In addition to the visual factors described previously, the visual resources analysis considered viewer exposure. The elements of viewer exposure help to define viewer perceptions resulting from a dynamic experience with the landscape and related visual resources. Viewer exposure varies depending on the angle of view (i.e., normal, inferior, or superior viewing angles); view distance (foreground, middle ground and background); relationship to sun angle (backlighting vs. front or side lighting); the extent of visibility (i.e., whether views are panoramic or limited by vegetation, topography, or other land uses); and viewer screening conditions (e.g., whether the project facilities will be skylined on ridgelines, backscreened by topography and/or vegetation, or screened by structures or vegetation in the foreground). Viewer exposure also considers the duration of view based on viewer activity (e.g., travel route, residential, recreation, etc.) and often relates to speed of travel (pedestrian, vehicular, or stationary). Viewer exposure is considered long term for residents and short term for travelers along roadways.

Viewer Groups – Number and Types of Viewers

Potentially sensitive viewers are determined based on the type and amount of use various land uses receive. Land uses that derive value from the quality of their settings are considered potentially sensitive. Land uses within the project area that are considered sensitive to visual changes to their settings include residential and natural areas, designated and eligible state historic routes and scenic highways.

Distance Zones–Foreground, Middle-Ground, and Background Distances

The distance from which a project component may be viewed affects the visual dominance and clarity that a feature or component may have within the seen landscape. Distance zones are described in this section according to *foreground views, middle-ground views*, and *background views*. *Foreground* views pertain to viewing distances where the viewer has close range visibility to a given object (generally within 0.25–0.5 mile away). *Middle-ground* views typically pertain to viewing distances between 0.5 mile and 3 miles away, where objects are still distinguishable from other adjacent visual features. *Background* views pertain to viewing distances up to 15 miles away, where visibility of objects is less distinctive, and where ridges and skylines provide the greatest potential viewing opportunities to an object. The effects of distance zones can be modified by environmental conditions such as angle of view related to landscape topography (acute angles can foreshorten distance zones), and view angle relative to sun location (backlighting can reduce visual clarity that modifies the effective viewing distance).

1.3 Key Issues

Adverse effects typically associated with the project construction include the loss of natural vegetation, removal of natural or urban features with aesthetic value, and/or the introduction of contrasting elements within the existing landscape setting. The loss or degradation of significant visual features or views and the introduction of project features that would significantly conflict and contrast with the visual character of an area or with the existing elements of form, line, color and texture can be considered significant adverse visual effects. The elements of the proposed project that could potentially result in significant visual quality impacts include:

- removal of vegetation from the project site and replacement with a solar facility to include concentrating photovoltaic (CPV) panels, a 34.5/138 kilovolt (kV) substation, an O&M facility, an aboveground and underground collection system, on-site access roads, and staging/laydown areas;
- six-foot-tall perimeter fence and 30 –50-foot-wide fire buffer areas with limited vegetation;

- grading activities (approximately 694,452 cubic feet of cut and 694,444 cubic feet of fill –the entirety of the site's 420 acres would be disturbed) and the resulting contrast in color and texture between tan colored soils and dark green color of the local vegetation;
- installation of approximately 2,657 CPV panels, a 7,500 square-foot substation featuring a 35-foot-tall 138 kV dead-end structure, and other project facilities
- potential glint and glare from CPV panels
- installation of an underground and overhead dual circuit 138 kV transmission line, with steel support structures (structures would be up to 150 feet tall) that would run approximately 6 miles to its point of interconnection with the rebuilt SDG&E Boulevard Substation, and
- Night lighting around selected facilities.

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2.0 PROJECT DESCRIPTION

The proposed project is situated south of Tierra Del Sol Road and immediately north of the U.S./Mexico International Border, approximately 3.5 miles south of SR-94 in the eastern portion of unincorporated San Diego County. Figure 1, Regional Map, shows the project's relationship within San Diego County. Figure 2, Vicinity Map, shows the project's relationship to the surrounding unincorporated community of Boulevard.

The proposed Project would produce up to 60 megawatts (MW) of solar energy and would consist of approximately 2,657 CPV trackers on 420 acres in southeastern San Diego County near the unincorporated community of Boulevard, California. As proposed, the project will be developed in two phases. Phase I would include the construction and operation of 45 MWs (1,993 CPV trackers) on approximately 330 acres. Phase II would consist of the construction and operation of 15 MWs (664 CPV trackers) on approximately 90 acres (see Figure 3, Preliminary Site Plan). The project includes a Major Use Permit (MUP) to authorize a Major Impact Utility Pursuant to Sections 1350, 2705, and 2926 of the Zoning Ordinance. The project will also require a Rezone to remove Special Area Designator "A" and ensure compliance with Section 5100 of the Zoning Ordinance. An Agricultural Preserve Disestablishment will also be required to develop the project site as proposed.

Individual tracker dimensions are approximately 48 feet across by 25 feet tall. Each CPV Tracker unit would be mounted on a 28-inch steel mast (steel pole) which would be supported by either (1) inserting it into the ground up to 20 feet and encasing it in concrete, (2) vibrating the mast into the ground up to 20 feet deep, or (3) attaching it to a concrete foundation sized to adequately support the CPV Tracker based on wind loading and soil conditions at the site. The preferred method would be to set the mast by vibratory pile driving methods depending upon soil conditions.

In its most vertical position and depending on foundation design, the top of each tracker would not exceed 30 feet above grade, and the lower edge would not be less than 1 foot above ground level. In its horizontal "stow" mode (for high winds), each tracker would have a minimum ground clearance of 13 feet 6 inches.

Power from the CPV system in each Building Block would be delivered from each tracker to a conversion station through a 1,000 volt DC underground collection system. The underground 1,000 V DC collection system construction footprint would include a trench of 1–2 feet in width and a depth of up to approximately 4 feet. It is anticipated that power from the CPV systems on site would be separated into three 34.5 kV underground collection circuits, each delivering approximately 20 MW of power to the project substation.

Each 34.5 kV underground branch circuit associated with Phase I would connect to a 34.5 kV overhead trunk line on the project site for delivery to the project substation. These two collection circuits for Phase I would run overhead on an above ground trunk line adjacent to the south side of the Southwest Powerlink right of way. The approximately 1.2-mile-long above ground trunk line would utilize steel poles and would be approximately 50 –75 feet high and spaced about 300 –500 feet apart. The minimum ground clearance of the 34.5 kV lines would be 30 feet. The maximum hole dimensions for steel pole foundations would be 24 inches in diameter and approximately 20 feet deep. Phase II will connect to the Project substation entirely via one 34.5 kV underground branch circuit and the underground 34.5 kV collection system construction footprint would include a trench of 3-4 feet in width and a depth of up to approximately 4 feet. Base material would be installed in all trenches to (i) ensure adequate drainage, and (ii) to ensure sufficient thermal conductivity and electrical insulating characteristics below and above collection system cables.

The project will include construction of a 34.5/138 kV step-up substation site (located within the northeast corner of the project site and adjacent to the operations and maintenance (O&M) annex site) that would increase the voltage received from the overhead and underground collector system from 34.5 –138 kV. Switching and transformer equipment as well as a control house and a parking area for utility vehicles would be located within the 3-acre substation site and for security purposes and to allow for nighttime inspections, lighting would be installed near substation equipment, the control shelter, and on the entrance gates. A backup power and storm positioning system would detect a damaging storm and communicate a storm position to each tracker. This system would also have enough electrical capacity to bring the trackers into the horizontal position ("storm position") in case the primary power supply is cut.. The backup power and storm positioning system would include the following: (1) a 1.5 MW diesel-powered emergency generator or equivalent located at the substation, (2) an Uninterrupted Power Supply (UPS) battery storage system at each inverter station, or (3) a 20 kW propane generator at each inverter skid.

A 4-acre O&M annex site would be located adjacent to the substation site and would house operations and maintenance supplies, telecommunications equipment, and administrative and operational offices all within a single-story precast building. It is anticipated that in-place tracker washing would occur every 6–8 weeks during nighttime or evening hours using an IPC Eagle Wash Station, which would be towed by a pick-up, ATV, or Cushman electric cart. On-site water storage tanks may be installed to facilitate washing.

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FIGURE 1

Regional Map

VISUAL RESOURCES AND AESTHETICS REPORT- TIERRA DEL SOL SOLAR FARM

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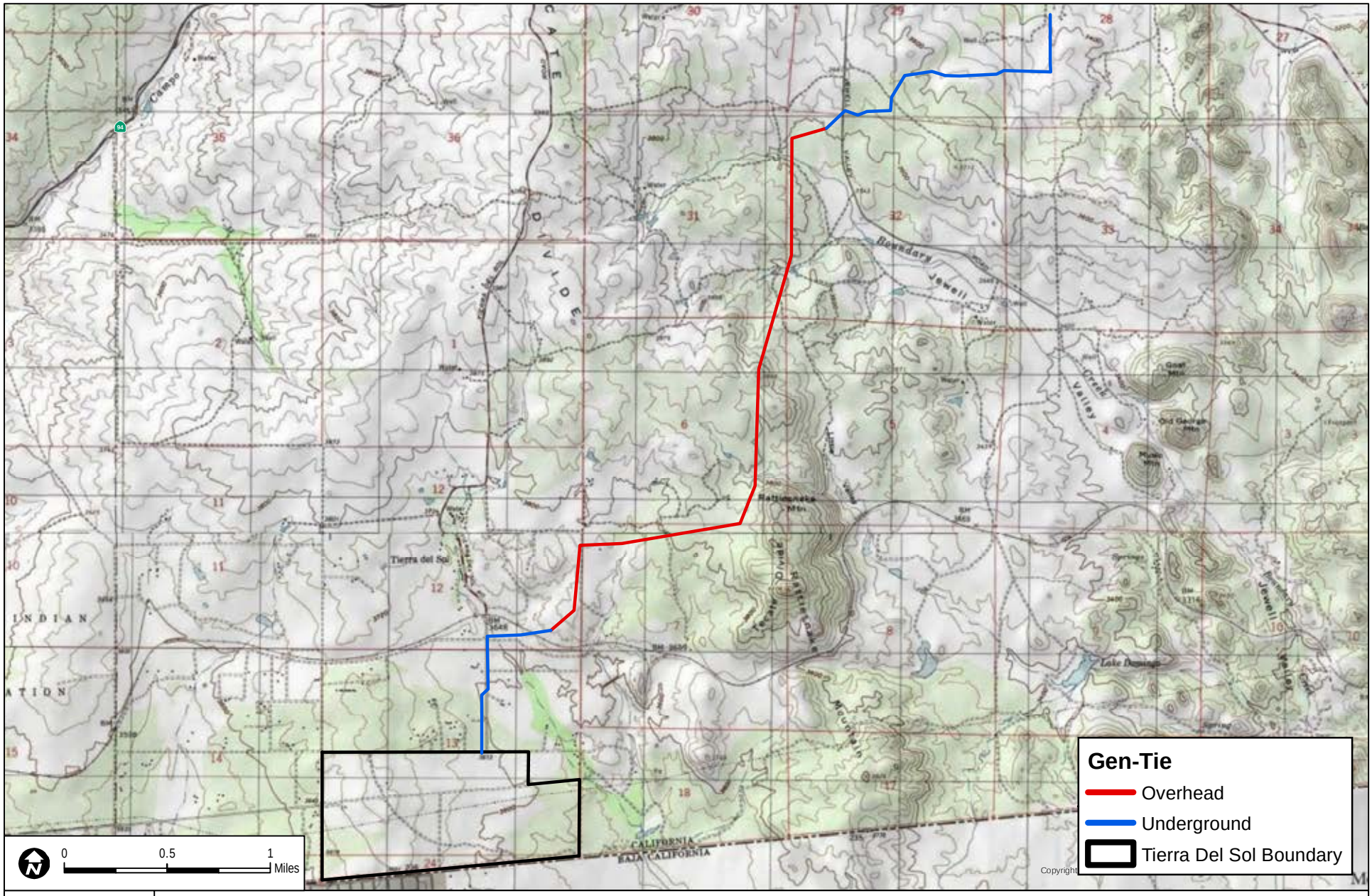

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SOURCE: USGS 7.5-Minute Series Tierra Del Sol and Live Oak Springs Quadrangle.

FIGURE 2

Vicinity Map

VISUAL RESOURCES AND AESTHETICS REPORT- TIERRA DEL SOL SOLAR FARM

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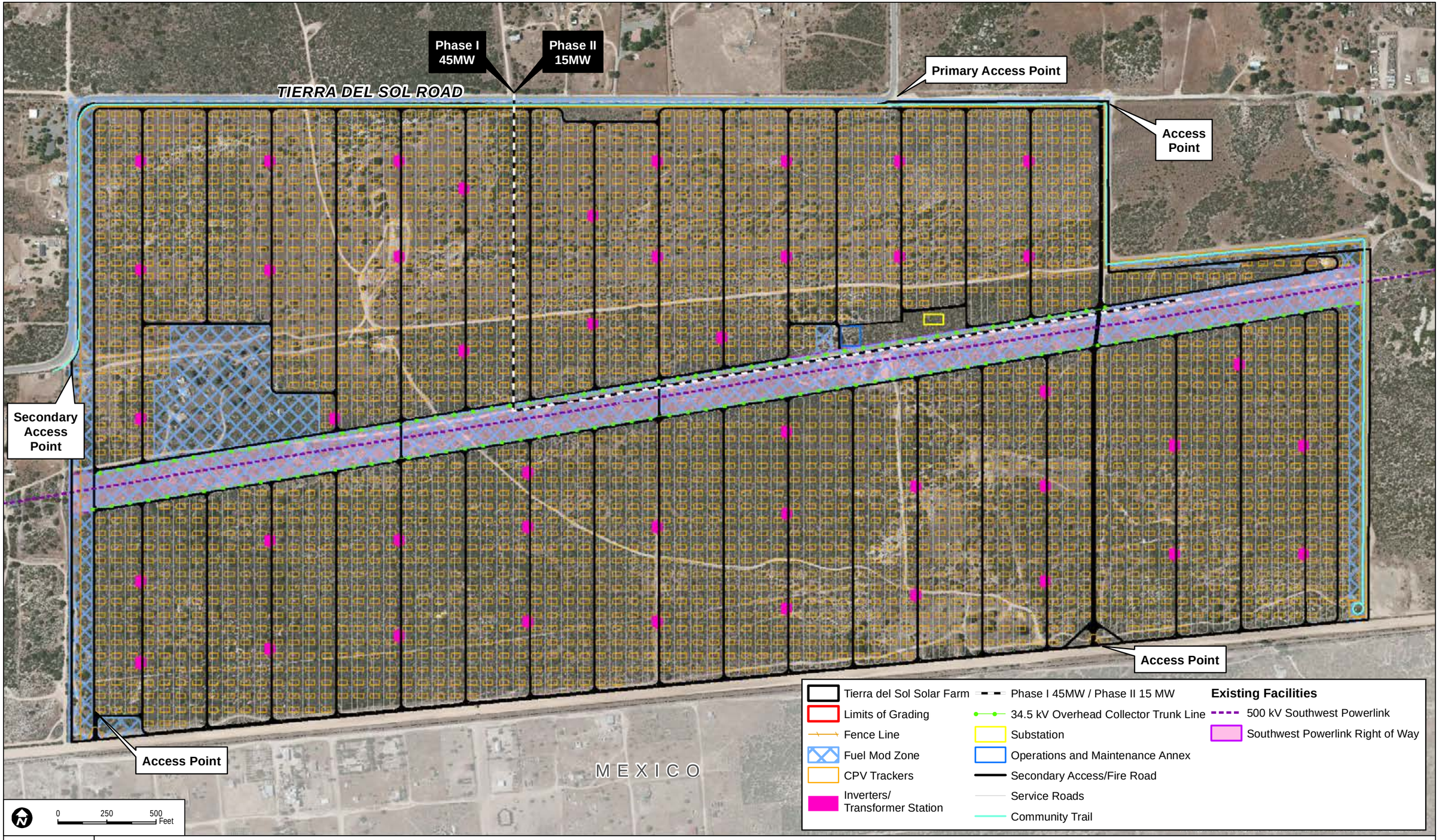

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SOURCE: SanGIS 2011; AECOM 2012; Soitec 2012; Bing Maps

FIGURE 3

Preliminary Site Plan

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Project construction would consist of several phases including site preparation, development of staging areas and site access roads, solar trackers assembly and installation, and construction of electrical transmission facilities. The project would require a total of approximately 372 acres of site preparation activities prior to solar CPV installation, in addition to approximately 47 acres of fire buffer preparation involving non-motorized brush clearing techniques. After site preparation, initial project construction would include the development of the staging and assembly areas, and the grading of site access roads for initial tracker installation. The project would be constructed over a period of up to approximately 14 months, which includes Phase I, Phase II, and the gen-tie line.

Gen-Tie Line

Power from the on-site private substation would be delivered to the 138 kV bus at SDG&E's Rebuilt Boulevard Substation via an approximate 6-mile overhead and underground dual circuit 138 kV gen-tie line (see Figure 4, Gen-Tie Alignment). The dual circuit 138 kV transmission line would travel roughly in a northeasterly direction in County ROW and over private land from the on-site private substation to SDG&E's rebuilt Boulevard Substation. Approximately 3.5 miles of the transmission line would be overhead and 2.5 miles would be underground.

The overhead portion of the gen-tie alignment would require the setting of new steel transmission poles and conductors installed along the poles to deliver power from the project site to the Rebuilt Boulevard Substation. Since the span between poles would be dependent on the terrain, the cable span lengths range from 500–1,400 feet and would require between 20–25 steel poles, with a maximum height of 125–150 feet. Temporary work areas measuring 80 feet by 80 feet around each steel pole location would be cleared of vegetation in order to assist in pole installation.

Blasting activities may be required to facilitate excavation in some areas where steel poles will be installed to around 10–20 feet deep, depending on the soils and height of the pole. Holes will be formed via use of a truck-mounted auger and will excavate between 8–12 cubic yards of soil. Poles will then be delivered to the site via a flat-bed truck and lifted into place with a crane. Pole installation may also be facilitated by use of a helicopter. The gap between the excavation and steel pole will then be backfilled with concrete.

Conductor wire stringing will be completed following pole installation. The work will be primarily completed from bucket trucks and pull sites located along the right of way. Rollers will be temporarily attached to the lower end of the insulators to allow the conductor to be pulled along the line. A rope will then be pulled onto the rollers from structure to structure. Once the rope is in place, it will be attached to a steel cable and pulled back through the sheaves. The conductor will then be attached and pulled back through the sheaves and into place using

conventional tractor-trailer pulling equipment located at pull-and-tension sites along the line. The pulling through each structure will be done under a controlled tension to keep it elevated and away from obstacles.

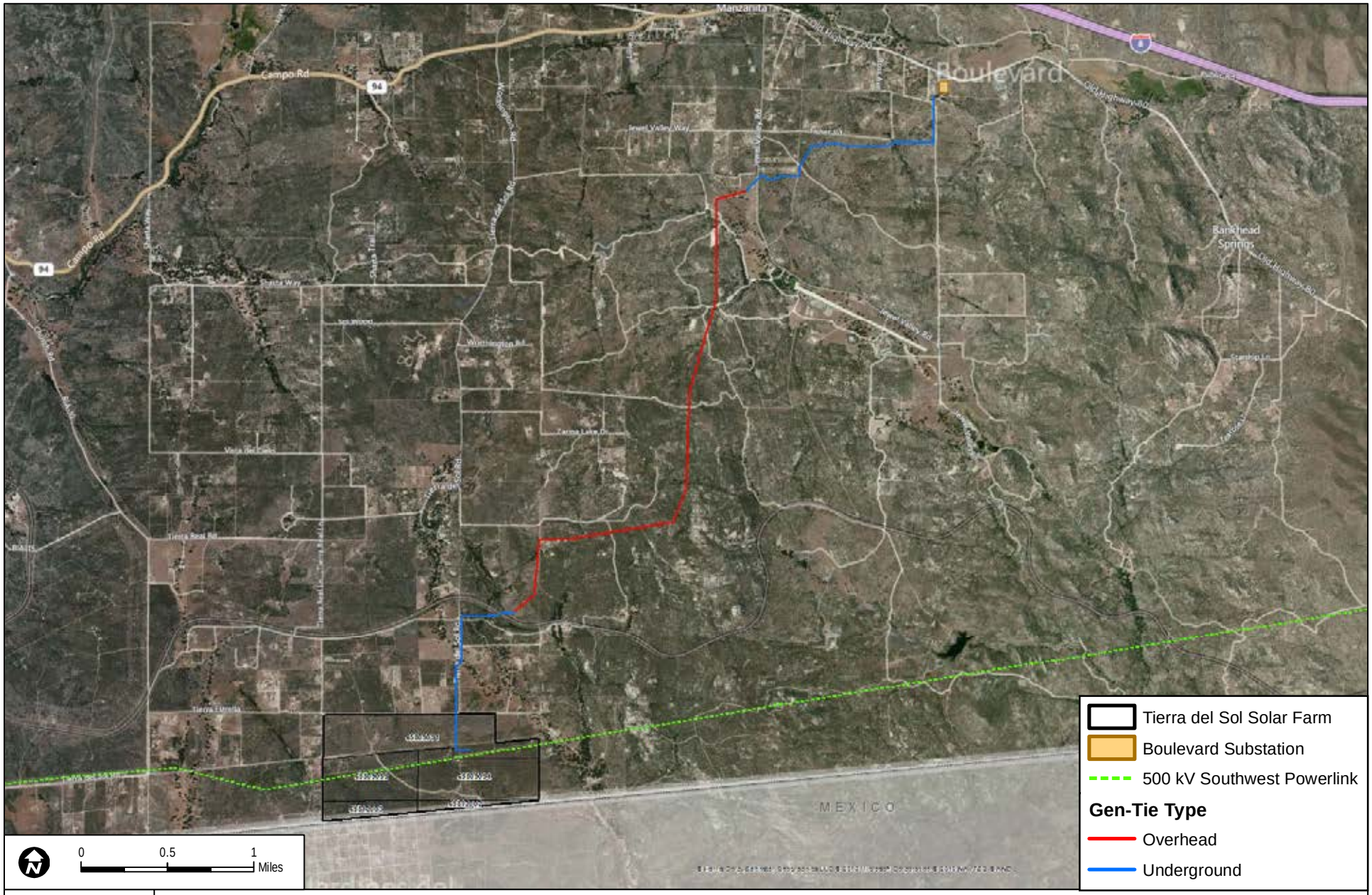
2.1 Land Use Designations and Zoning

General Plan land use designations and zoning for the affected parcels is identified in Table 1. Zoning designations applicable to the project site are depicted on Figure 5, Zoning Designations, of the Agricultural Preserve Disestablishment Report prepared for the project. Each of the five parcels comprising the site is currently vacant however; there is visual evidence of past agricultural uses on site (on APN 658-090-54). The project does not propose to change the existing land use designation or A70 and S92 zoning applicable to the site; however, a rezone will be required to remove Special Area Designator "A" and ensure compliance with Section 5100 of the Zoning Ordinance. An Agricultural Preserve Disestablishment will also be required to develop the project site as proposed.

Table 1
Existing General Plan Land Use Designation and Zoning

Assessor Parcel Number	Approximate Acreage	General Plan Land Use Designation	Zoning
On-Site Parcels-Solar Farm			
658-090-31	163.7	Rural Lands (RL-80)	Limited Agriculture (A70)
658-090-54	114.6	Rural Lands (RL-80)	General Rural (S92)
658-090-55	92.9	Rural Lands (RL-80)	General Rural (S92)
658-120-02	16.5	Rural Lands (RL-80)	General Rural (S92)
658-120-03	31.9	Rural Lands (RL-80)	General Rural (S92)

Note: The gen-tie alignment would traverse approximately 15 parcels owned by 10 different property owners. Applicable General Plan designations for properties traversed by the gen-tie include Rural Lands (RL-20), Rural Lands (RL-80), Village Residential (VR-15), and Village Residential (VR-4.3). Zoning designations applicable to properties traversed by the gen-tie line would be limited to the General Rural (S92).



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SOURCE: SanGIS 2012; Bing Maps

FIGURE 4

Gen-Tie Alignment Map

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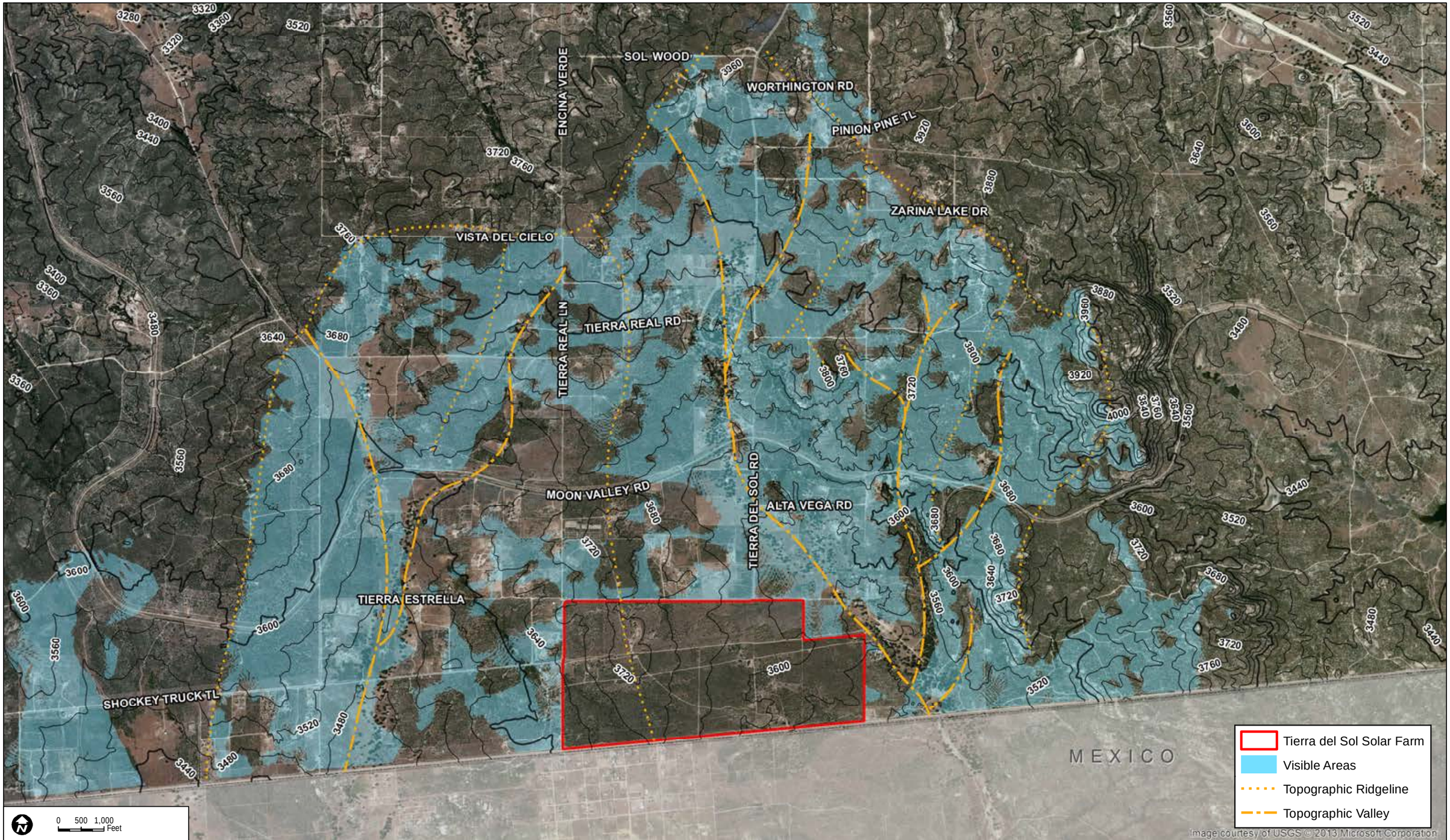

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SOURCE: SanGIS 2012; Bing Maps

FIGURE 5

Solar Farm Viewshed Map

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2.1.1 Surrounding Land Uses

The project site is bordered by Tierra del Sol Road to the north and west, approximately 50 feet of dirt right-of-way adjacent to the U.S./Mexico border fence to the south, and federal government (and undeveloped lands) to the east. The general plan land use designation for the parcels in the immediate vicinity of the project site including those either bordering the site to the east or those adjacent to Tierra del Sol Road is Rural Lands 80 (RL-80). A maximum density of 1 unit per 80 gross acres is permitted within the RL-80 designation (County of San Diego 2011a). With the exception of the federal government parcel and undeveloped lands abutting the eastern boundary of the project site and zoned Limited Agriculture, parcels in the vicinity of the solar farm site are zoned General Rural. Within the A70 and S92 zoning designations, Major Impact Services and Utilities such as solar farms and transmission lines are subject to a major use permit (County of San Diego 1978).

Rural residences are located to the west, north, and northeast of the project site. The nearest residence, a small single-story structure, is located within 100 feet of western boundary of the site and the private parcel abuts APN 658-090-55.

The gen-tie alignment would traverse private properties designated Rural Lands 20 (RL-20), Rural Lands 80 (RL-80), Village Residential 15 (VR-15), and Village Residential 4.3 (VR-4.3) and zoned General Rural (S92). According to the General Plan, the Rural Lands category is applied to large open space and very-low-density private lands that provide for (among other uses) agriculture, managed resource production and conservation (County of San Diego 2011a). In addition, the gen-tie would traverse public right-of-way associated with Tierra Del Sol Road and Jewel Valley Road as well as right-of-way associated with the San Diego and Arizona Eastern railway. Land uses along the alignment include sparse, rural residential development, undeveloped, chaparral covered lands crossed by an informal network of branched dirt access roads, and cleared, pasture lands populated with small clusters of oak trees. Photos of surrounding land uses along the gen-tie alignment are included in Attachment A to the Tierra del Sol Solar Farm Project Agricultural Preserve Disestablishment Report.

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3.0 REGULATORY SETTING

3.1 Federal

There are no relevant federal policies concerning the protection of visual resources that would be applicable to a solar farm development located on County of San Diego jurisdictional land.

3.2 State

California Environmental Quality Act (CEQA)

Under CEQA, impacts to aesthetic resources resulting from a project must be considered by state and local agencies. Appendix G of the CEQA Guidelines includes a series of questions which agencies may use when assessing the potential aesthetic impacts of a proposed project. The questions, which identify scenic vistas, trees, rock outcropping, and historic buildings within a state scenic highway system as important scenic resources, often formulate the impact analysis within the relevant environmental document accompanying a project

Appendix G of the CEQA Guidelines states that the potential for aesthetic resource impacts exists if the project would:

- have a substantial a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings viewed from a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

California Scenic Highway System

Mostly comprised of state highways, the California Scenic Highway System contains highways designated by the California Department of Transportation as scenic. The State Legislature makes highways eligible for scenic highway designation however, for a highway to be declared scenic, the local government with jurisdiction over lands abutting the highway must implement a scenic highway corridor program which protects the scenic appearance of the corridor. Corridor protection may be achieved through a variety of means including (but not limited to) regulation of land uses and intensity of development , detailed land and site planning, control of outdoor

advertising, consideration of earthmoving and landscaping, and the design and appearance of structures and equipment.

There are four officially designated scenic highways in San Diego County: SR-125 (between SR-94 and I-8 in La Mesa), SR-163 (between the north and south boundary of Balboa Park), SR-75 (between Imperial Beach and Coronado) and SR-78 (between west and east boundary of Anza Borrego Desert State Park). In the project area, SR-94 and I-8 are eligible state scenic highways however, neither has been officially designated.

California State Historic Routes

Old Highway 80 is a designated California State Historic Route. In 2006, the state legislature (through Assembly Concurrent Resolution (ACR) 123) granted official historic designation in recognition of the highway's natural, cultural, historic, and scenic qualities. However, despite the characterization as a historic route, the designation does not influence the future planning or development of adjacent public and private properties (State of California Legislature 2006).

3.3 Local

There are several plan policies adopted by the County of San Diego that support and promote the development of the Project and similar alternative energy facilities. Please refer to the Tierra Del Sol Solar General Plan Analysis Report that was prepared by County staff. This report details how the proposed project complies with the County's General Plan, the Mountain Empire Subregional Plan, and the Boulevard Community Plan.

San Diego County Zoning Ordinance

The provisions of Sections 5000 through 5964 of San Diego County's Zoning Ordinance, also known as the Special Area Regulations, set forth regulations to ensure that consideration is provided for areas of special interest or unusual value. When Special Area Regulations require the issuance of a Minor Use Permit or a Major Use Permit, such permits are only issued when the proposed use satisfies all conditions and requirements of the Special Area Regulations and is found consistent with the intent and purpose of the applicable Special Area Regulations. The Special Area Regulations and associated Zoning Ordinance Sections that apply to the Project include Scenic Area (S), Sections 5200–5212.

The provisions of Sections 6000 through 6991 of San Diego County's Zoning Ordinance outline the general zoning regulations and include a few regulations regarding glare and outdoor lighting. Sections of the general regulations applicable to the Project include 6320, 6322, and 6324 (County of San Diego 2011b).

Finally, Section 6952 of the County's Zoning Ordinance regulates Solar Energy Systems. Section 6952 (b) (2) specifies that a photovoltaic solar energy system for off-site uses with a project area greater than 10 acres is considered a Major Impact Service and Utility within all zones and requires a Major Use Permit. In addition, Section 6952 (3) (c) specifically relates to visual resources and requires that the following measures be implemented to minimize the visual impacts of a project:

- Removal of existing vegetation shall be minimized;
- Internal roads shall be graded for minimal size and disruption;
- Any accessory buildings shall be painted or otherwise visually treated to blend with the surroundings; and
- A structure shall be non-reflective in all areas possible to blend with the surroundings.

San Diego Light Pollution Code

The San Diego Light Pollution Code (Dark Skies Ordinance) restricts outdoor lighting to protect dark skies and astronomical research. San Diego County is divided into two zones: Zones A and B. Zone A is the area within a 15-mile radius of the Palomar and Mount Laguna Observatories. The rest of the county is within Zone B. Zone A has more stringent lighting restrictions to preserve the ability to view the sky from the observatories. The Project site would be located in Zone B, which has less stringent lamp type and shielding requirements (County of San Diego 1986).

San Diego County General Plan

Protection of the County's existing visual resources are discussed in Chapter 5, Conservation and Open Space Element, of the San Diego County General (County of San Diego 2011a). In addition to addressing the aesthetic value of landscapes/settings and astronomical dark skies, the Conservation and Open Space Element establishes a County Scenic Highway System that includes freeways, highways and roads located along corridors with considerable natural or otherwise scenic landscapes. Within the project area, Interstate 8, State Route 94 and Old Highway 80 are included in the County Scenic Highway System (County of San Diego 2011a).

3.4 Community Design Policies and Guidelines

Please refer to the Tierra Del Sol Solar General Plan Analysis Report that was prepared by County staff. This report details how the proposed project complies with the County's General Plan, the Mountain Empire Subregional Plan, and the Boulevard Community Plan.

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4.0 VISUAL ENVIRONMENT OF THE PROJECT

Solar Farm Site

The project area is comprised of hilly, gently rolling terrain covered with chaparral vegetation, rock outcrops, and occasional (and isolated) tree groves. Large lot rural residences in the area are modest and developed parcels are routinely separated from one another by expanses of dense chaparral vegetation. While the undeveloped project site is an elevated series of adjoining parcels, the on-site topography gently slopes south, east and west from the end of a central north-south trending ridge which effectively obscures portions of the site from off-site viewing areas (the undulating on-site landscape slopes into two shallow valleys east and west of the project area). Vegetation in the area primarily consists of chaparral, flat-topped buckwheat and big sagebrush scrub all of which exhibit a low to moderate, spreading form and coarse texture. Several tall Tecate Cypress trees that are not readily visible from off-site viewpoints because of on-site terrain are located near the southern boundary of the site. A separate grove of prominent ornamental pine trees is located nearer to top of the central ridgeline of the project site and are readily apparent from within the project viewshed area at all viewing ranges. From foreground viewpoints, these trees are a dominant feature on the southern horizon.

Vegetative coverage within the vicinity of the solar farm site is rather consistent; however, it is occasionally broken by the wide expanse and contrasting color of paved roadways and dirt access roads. In addition to transportation facilities, existing features including industrial scale transmission structures associated with Southwest Powerlink (SWPL), the international border fence, low-voltage distribution lines, chain link and post fencing contribute to the visual environment of the project area and affect existing visual quality and character. For example, the brown, slightly rust–colored international border fence and adjoining public reserve line located at the southern end of the project area viewshed create a strong linear disruption that creates form, color, and texture contrasts with surrounding vegetation. Similarly, the numerous access roads located in the project area create visible breaks in a relatively consistent visual pattern by introducing a vivid light brown colored line of the native soil that strongly contrasts with the predominantly dark green vegetation cover. Also, the vertical lines and large, geometric form of SWPL transmission structures also work to disrupt and create breaks in the natural visual landscape by contributing bold, prominent forms to the existing visual environment. Representative photographs of the visual environment of the project area are included in Attachment A to this report.

Most of the residences within the immediate project area are accessible off Tierra del Sol Road, which borders the project site to the north and west. To the west of the site residential development is patchy and nearly non-existent beyond the paved terminus of Tierra del Sol

Road, which defines the eastern edge of the Campo Indian Reservation that is located approximately 2 miles west of the project site. The infrequently operating Desert Line of the San Diego and Arizona Eastern Railroad runs through the community of Tierra del Sol and the right-of-way for the old railroad currently serves as the general alignment for a proposed east-west community trail. The topography of the area rises to the north, east, and west, which tends to confine views from the project site to a middle-ground viewing distance. As such, views of the solar farm site do not extend to Interstate 8, SR-94, and Old Highway 80. Interstate 8 and SR-94 are eligible state scenic highways and all three facilities are included in the County Scenic Highway System. Originally constructed in 1917, Old Highway 80 remains the main thoroughfare passing through the Boulevard community.

Gen-Tie Line

Similar to the solar farm site, lands traversed by the gen-tie alignment include undulating ridgelines covered with chaparral vegetation and granitic, lightly colored rock outcrops and rolling terrain featuring dense clusters of chaparral interspersed by clumps of lightly colored exposed soils, dirt access roads and sparse rural residential development. In addition, segments of the gen-tie line near Jewel Valley Road would traverse a relatively wide, cleared valley associated with agricultural uses and displaying random groupings of large oak trees (see Figure 4, Gen-Tie Alignment).

Between the solar farm site and the gen-tie interconnection point at the rebuilt Boulevard Substation, vegetation coverage across private lands is relatively dense; however, natural features including rock outcrops and oak scattered valleys as well as manmade features including roads, residential development and agricultural lands interrupt the relatively continuous visual pattern created by wide and long expanses of chaparral vegetation. In addition, along public roadways changes in form, line, and color in the landscape are evident as the transition between wide, flat valleys, rolling hills, and prominent boulder covered ridgelines is relatively abrupt. The regional energy infrastructure visible from the solar farm site and Tierra Del Sol Road displays large, tall forms, bold lines and metallic color that tend dominate southern oriented views. Local energy and communication infrastructure located north of the solar farm site and near Tierra Del Sol Road is generally supported by vertical wood poles displaying a rural scale. In additional to paved and dirt roads, short, wood and wire fencing, scattered residential development and barn facilities, and wide areas cleared for pasturelands or other agricultural uses contribute to the visual environment along Jewel Valley Road. Also, the tall form of skylined communication facilities and meteorological towers dot the landscape visible from Jewel Valley Road and contribute bold lines and smooth metallic textures to the existing visual environment. Lastly, near the gen-tie interconnection at the rebuilt Boulevard Substation, rural residential development becomes increasing consistent in the landscape and the complex form

and angular lines of the substation itself contrast with the boxy, simple form and horizontal lines of residential homes as well as with the pattern elements of surrounding terrain and vegetation.

As discussed in Section 2.1, the proposed gen-tie line would traverse approximately 15 parcels owned by 10 property owners. It should be noted that not all parcels traversed by the gen-tie line contain a residence. There are approximately 8 residences on properties abutting Tierra Del Sol Road (the underground gen-tie line would be installed in the ROW adjacent to the roadway) and access to these residences are provided off of Tierra Del Sol Road. Residences are also located near the rebuilt Boulevard Substation and Old Highway 80 at the northern terminus of the gen-tie line. The gen-tie line would also cross various transportation facilities located between the solar farm site and the rebuilt Boulevard Substation. For example, north of the solar farm site, the overhead segment of the gen-tie line would traverse the San Diego and Arizona Eastern Railroad and unnamed dirt access roads on private property. Further, the underground segment of the gen-tie line would cross Jewel Valley Road, unnamed dirt access roads, and Tule Jim Lane.

4.1 Project Setting

The proposed project is located in the southeastern portion of San Diego County near the convergence of the Peninsular Ranges and the western Colorado Desert region in the unincorporated communities of Tierra del Sol and Boulevard. The proposed solar farm site is located in the community of Tierra Del Sol and the rural village boundary of Boulevard is located approximately 4 miles to the northeast. The gen-tie line would traverse lands in both communities and would interconnect to the rebuilt Boulevard Substation located off of Old Highway 80 in Boulevard. The proposed project is situated within the eastern portion of the California Peninsular Ranges, which are located to the north and east (elevations within the project vicinity Peninsular Ranges range from 3,000–6,000 feet above mean sea level (AMSL)) and include the local In-Ko-Pah and Laguna Mountains. In addition, the Tecate Divide (elevation 4,140 feet) and Rattlesnake Mountain (elevation 1,198 feet) are located approximately 4 miles to the north and 1 mile to the east of the solar farm site, respectively. The California Peninsular Ranges are typified by granitic boulder and chaparral covered steep western-facing mountain slopes, evergreen and temperate forests near higher elevation peaks, and desert chaparral vegetation on the eastern-facing slopes. Mountain areas are primarily undeveloped however; lower elevation valley areas contain scattered rural development. The project vicinity includes several scenic areas including Cleveland National Forest lands and the Laguna Mountain Recreation Area to the north and public BLM-managed lands to the northeast (north of Interstate 8). As stated previously, Interstate 8 and SR-94 are eligible state scenic highways and Interstate 8, SR-94, and Old Highway 80 are included within the County of San Diego Scenic Highway System.

The project area includes scattered rural residential development, undeveloped chaparral-strewn lands, regional transmission infrastructure and agricultural operations. The densest population center in the area, the census designated place (CDP) of Boulevard had a population of 315 in 2010 (U.S. Census Bureau 2013). Interstate 8 provides regional access to Boulevard and other communities in the Mountain Empire subregion. Old Highway 80 is the primary local thoroughfare and commercial corridor through Boulevard and the community of Jacumba to the east. West of Boulevard, Old Highway 80 becomes State Route 94/Campo Road and this facility runs west to Interstate 5 in the City of San Diego. Local access to the solar farm site is provided by Tierra del Sol Road which runs perpendicular to Old Highway 80. The intersection of Tierra del Sol Road and Old Highway 80 is located approximately 4 miles north of the solar farm site.

South of Campo Road, Tierra del Sol Road passes through a landscape featuring gently rolling hills covered with chaparral vegetation and irregular outcrops of exposed granite boulders. At approximately 1.3 miles south of Campo Road, modest rural residences, a small CalFire outpost, and a prominent telecommunications facility (White Star) dot the landscape and contribute variation to the visual setting. Along the route, several dirt access roads run perpendicular with Tierra del Sol Road and provide access to distant residences. These flat, graded roadways create breaks in visual continuity by exposing and introducing streaks of light-colored granitic soils that contrast starkly with the olive green color of dominant chaparral vegetation.

Although the Boulevard has been known as a rural community, recent developments have resulted in a variable physical and visual setting that includes both rural and urban elements. Prominent components that contribute to the varied visual setting include large-scale energy infrastructure associated with the Southwest Powerlink and Sunrise Powerlink, which both consist of 500-kilovolt (kV) electric transmission lines supported by tall, geometric 150-foot-tall steel lattice structures, as well as several large, vertical, and metallic communication towers located at the White Star Communication Facility, the 60-foot-wide dirt public reserve, and the linear rust colored U.S.–Mexico international border fence (located immediately south of the Tierra del Sol site). In addition, the 25-turbine Kumeyaay Wind Farm is located atop the Tecate Divide (west of McCain Valley) and due to their prominent location, the stark white turbine towers and rotating blades are visible throughout much of the viewshed. The travel lanes and shoulders comprising Interstate 8 also traverse the Proposed Project area in a general east-west alignment and this transportation corridor contributes to the regional visual environment.

Also located within the community of Boulevard are components of the SDG&E East County Substation Project (ECO Substation) including segments of the ECO 138 kV transmission line rebuilt Boulevard Substation, and the Tule Wind project. The ECO Substation Project including the 18 kV transmission line and rebuilt Boulevard Substation, and Tule Wind project including the Tule gen-tie that will interconnect with the rebuilt Boulevard Substation, are all anticipated to

be near or fully constructed by the time this Environmental Impact Report (EIR) for the Soitec Solar Development Program (which includes the Tierra Del Sol Solar Farm Project) comes before the Board of Supervisors for certification. Accordingly, these projects as approved are included in the baseline, along with existing physical conditions.

4.2 Project Viewshed

Solar Farm Site

The proposed solar farm is located within the Tierra del Sol physiographic unit whose viewshed is enclosed by higher elevation terrain to the west, north, and east (see Figure 5, Solar Farm Viewshed Map). For purposes of this report, viewshed refers to the landform from which the project would be visible from and does not considered the screening effect of existing vegetation and structures. The Tierra del Sol Solar Farm viewshed encompasses a relatively small land area primarily located on the U.S. side of the international border with Mexico. To the south, the viewshed is interrupted by the east-west oriented border fence; however, the physiographic unit and the viewshed extend into the area north of Cienega Redonda in Mexico. The unincorporated community of Tierra del Sol occupies the central portion of the viewshed and comprises the land area located on either side of Tierra del Sol Road. As proposed, the project would be located in the central southern quadrant of the viewshed (see Figure 5).

North of the project site the topography gently rises and eventually reaches its high point on Tierra Del Sol Road near Worthington Road, approximately 1.7 miles south of State Route 94. At this point, formerly limited foreground-oriented views open, become broad and long, and extend south into Mexico. This point represents the northernmost edge of the solar farm viewshed and from this elevated location, several significant linear features are visible in the distant landscape. The tall, angular form of steel lattice structures supporting the 500 kV Southwest Powerlink electrical transmission line and the rectangular form and rust colored surface of the international border fence are partially visible from the northern limits of the solar farm viewshed. However, while these features contribute contrasting forms, lines, and colors to the otherwise natural landscape, due to distance, the background presence of elevated terrain in Mexico, and the available broad view, these features are not visually prominent. Rather, the visual effect of cleared lands and in particular, the contrasting rectangular forms and lightly colored surfaces of these areas, are much more apparent from this elevated viewing location. Still, the industrial nature of steel lattice structures as well as their large scale, metallic color, and relatively smooth texture disrupt the intactness, unity and vividness of the viewshed.

Continuing down Tierra del Sol Road for the next 1.3 miles into Tierra del Sol, the topography of the area drops and vegetation and structures obscure views of the project site. Travelers pass into and out of the project viewshed area, meaning that views of the project are fleeting. Small

private ranches, dirt access roads, natural vegetation, and large granitic boulders comprise the extent of most views. Through Tierra del Sol proper (a green informational sign installed adjacent to Tierra Del Sol Road and north of Tierra Real Road denotes the northern border of the small community), a small grove of oak woodlands enclose views from Tierra del Sol Road. The community is set within a gentle valley that is densely populated with oak trees that tend to screen views of the proposed solar farm site. It should be noted however that several structures and prominent oak trees within the community and adjacent to Tierra Del Sol Road were burned down during the Shockey Fire of September 2012 and evidence of the fire remains visible along the roadway. The fire burned approximately 2,500 acres and stretched west from Rattlesnake Mountain to the Campo Indian Reservation.

Just south of the oak populated valley, the road intersects the old San Diego and Arizona Eastern Railroad. This brief rise gives way to familiar views of gently sloping hills and chaparral vegetation of moderate height. Near the solar farm site and routinely along Tierra del Sol Road, U.S. Customs and Border Protection agents and their vehicles are a regular presence and contribute motion and intermittent dust clouds to the project landscape. The subject landscape exhibits a diverse vegetative cover that includes several chaparral communities including chamise, red shank, and granitic northern mixed chaparral as well as other communities typically associated with relatively dry area valleys including flat-topped buckwheat and big sagebrush scrub. The availability of soil and water in the area typically determines the density of vegetation cover. The vegetation cover in combination with granite boulder outcrops produces a landscape of grey-green color, coarse textures, and rugged contrasting forms. The western portion of the viewshed has a coarse texture and is primarily dominated by patchy, scattered chaparral vegetation and the exposed granite-colored soils of numerous access roads. In contrast, the eastern portion of viewshed (which also exhibits a relatively coarse texture) feature clumped chaparral vegetation and exposed granite boulders. For example, the western and eastern-facing slopes of Rattlesnake Mountain, located west of the project site, are heavily marked by numerous white and grey colored granite boulders as well as the similarly colored underlying rocky landform. Several shallow valleys are located in the viewshed and are characterized by exposed light-colored soils and small patchy groves of oak woodlands.

For purposes of this study, the solar farm viewshed extends approximately 3.5 miles from east to west. Local topography restricts the viewshed approximately 2 miles north of the project. The international border fence defines the limits of the viewshed south of the site. Within the general viewshed area are pockets where project views are obscured by vegetation and topography. For example, little project visibility exists on west-facing slopes, west of the project. Because the gen-tie line would be supported by steel support poles (approximately 100 feet in height), the viewshed of the gen-tie would encompass a larger land area than that of the solar farm (see Figure 5).

Meteorological conditions reduce visual acuity such that at distances greater than 2 miles, the visual detail of transmission structures associated with the existing 500 kV Southwest Powerlink transmission line is greatly reduced; these elements would be definite (but not prominent) and do not register as a significant portion of the total landscape. Existing low voltage transmission structures also tend to blend into the landscape as distance from the viewer increases due to vegetation and topography.

In addition, most views to the solar farm site are south-facing; therefore, viewers look toward incoming light rays and the landscape is viewed in a backlit condition that tends to reduce landscape detail and clarity for most daylight hours except in early morning and later afternoon.

Gen-Tie Line

Several gen-tie support poles would be located within the solar farm viewshed and therefore, composite views of the solar farm and gen-tie structures would be available from within the northern and eastern portions of the solar farm viewshed, and in particular, from Tierra Del Sol Road and other local roadways providing access to private residences. In addition to composite views of project components, the tall, vertical profile of gen-tie structures would extend the visibility of these features to land areas outside of the solar farm viewshed including into the Jewel Valley and Boulevard areas (see Figure 6, Gen-Tie Line Viewshed).

The western extent of the gen-tie viewshed is defined by a series of north-south topographic ridgelines. The prominent north-south ridgeline located in the western extent of the solar farm site effectively screens views of the Tierra Del Sol Road landscape, including the oak-populated valley adjacent to the roadway, from land areas within the wide valley located west of the solar farm site. The topography of the valley recedes from the solar farm site before eventually gaining elevation and reaching a high point on the Campo Indian Reservation, forming an additional north-south topographic ridgeline (see Figure 6). East of this ridgeline, the gen-tie line viewshed would extend to relatively small areas of private County lands and tribal lands and from these areas, gen-tie structures would be located approximately 1.5 miles away. Although the southernmost portion of the Campo Indian Reservation is undeveloped and is comprised of relatively dense chaparral vegetation, County lands are developed with rural residential uses featuring varying levels of vegetation coverage. The two topographic ridgelines that define the western extent of the gen-tie viewshed converge near Vista Del Cielo Road and proceed in a northeasterly direction. From this point northward, the western limits of the gen-tie line generally follows the alignment of Tierra Del Sol Road and intermittent visibility to gen-tie structures would be available to roadway motorists. The landscape visible from the roadways exhibits a relatively diverse assemblage of vegetation that includes several chaparral communities flat-topped buckwheat and big sagebrush scrub. Scattered rural residential development, dirt access

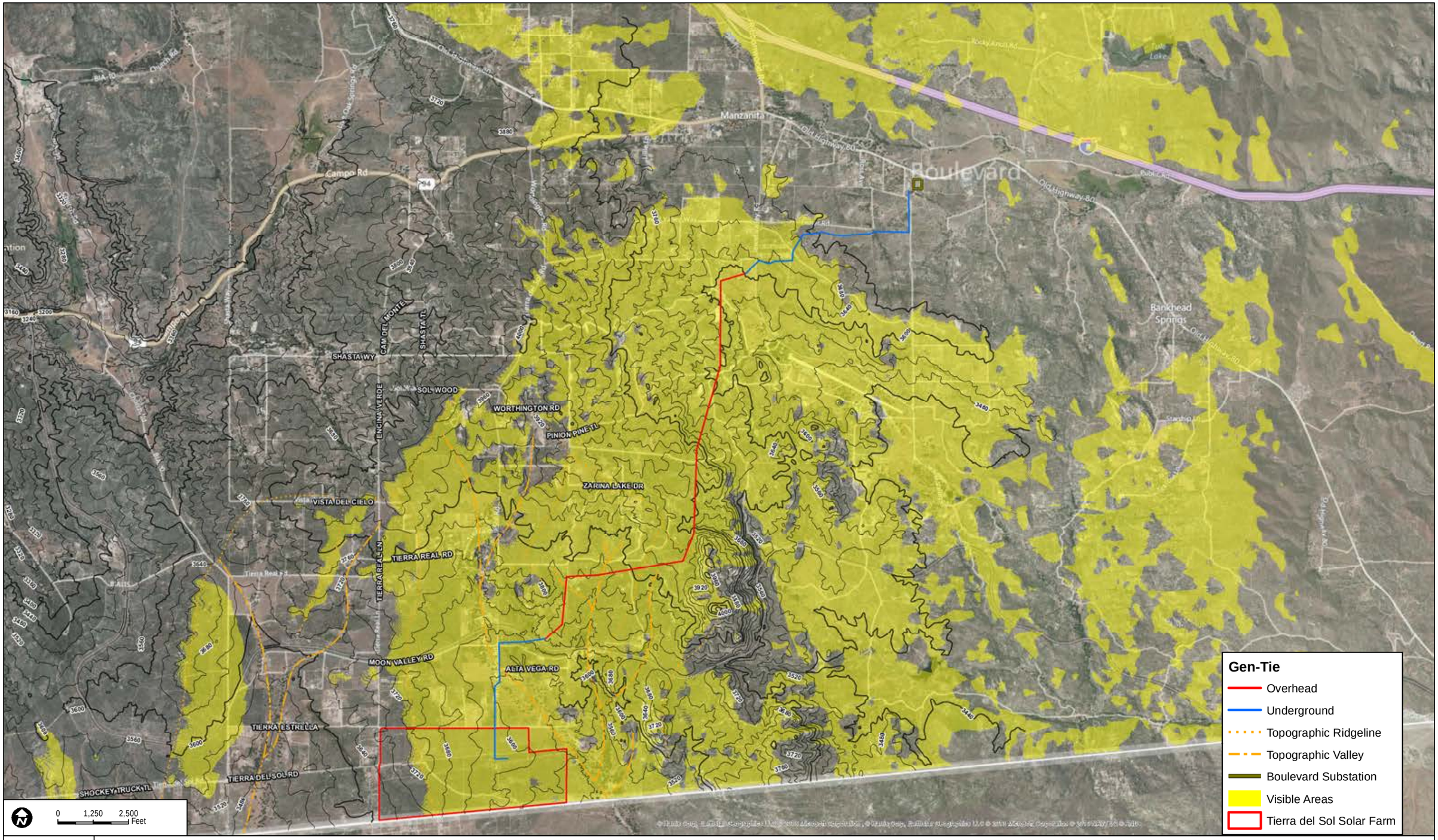
roads, meteorological towers, and the communication towers at the White Star Communication Facility also comprise the visible landscape from Tierra Del Sol Road.

East of the solar farm site, composite views of the gen-tie line and solar farm development would be available from private, rural residential lands and higher elevation undeveloped mountainous terrain near Rattlesnake Mountain. Pockets of land east of the topographic ridgeline defining the eastern viewshed limits of the solar farm would not be included in the gen-tie viewshed and these areas are generally undeveloped and comprised of chaparral vegetation and occasional boulder outcroppings. Lands east of the gen-tie alignment lose elevation, recede, and ultimately form Jewell Valley, a wide, low point in the visual landscape featuring clusters of oak trees and flat, cleared lands for agricultural usage. Empire Ranch, a large ranching operation, embodies the rural character of the valley landscape that is buffered on both sides by higher elevation topography and lands covered with chaparral vegetation and lightly colored granitic boulders. As proposed, the gen-tie line would descend into the valley from the south and the overhead alignment would transition to underground west of Jewel Valley Road. The northern and eastern extent of the viewshed would be limited due to the undergrounding of the line between Jewel Valley Road and the rebuilt Boulevard Substation. With the exception of increased rural residential development near the rebuilt Boulevard Substation, the character of the landscape remains relatively consistent between the valley and the terminus of the gen-tie line. Because of increased residential development, vegetation coverage near the substation is generally reduced from that of natural lands near Rattlesnake Mountain.

4.3 Landscape Units

A landscape character unit (LCU) is a portion of the regional landscape that is analogous to an outdoor room , which exhibits a distinct visual character. Topography, vegetation, and existing land contribute to the distinctness of visual character. Slopes, watershed ridges, and other physical elements can serve to distinguish one unit from another. The lines and elements that define landscape character units may be abrupt and obvious (a mountainous ridgeline for example) but may also be less obvious and transitional in nature (a transitional uplands area featuring irregular clumps of granite boulders which slowly gradate to distinct boulder-strewn mountain foothills). A landscape unit will often correspond to a place or district that is commonly known among local viewers.

For purposes of this study two LCUs, the Ridge and Valley LCU and Exposed Granitic Boulder Outcrops LCU, were identified in the project area. In addition, the McCain Valley LCU and the Mountains LCU previously identified and delineated as part of the Visual Resources Technical Report for the Rugged Solar Farm Project (Dudek 2013) are also located in the general project area. The four LCUs are depicted on Figure 7 and are discussed in greater detail below.



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7123

SOURCE: SanGIS 2012; Bing Maps

FIGURE 6

Gen-Tie Line Viewshed

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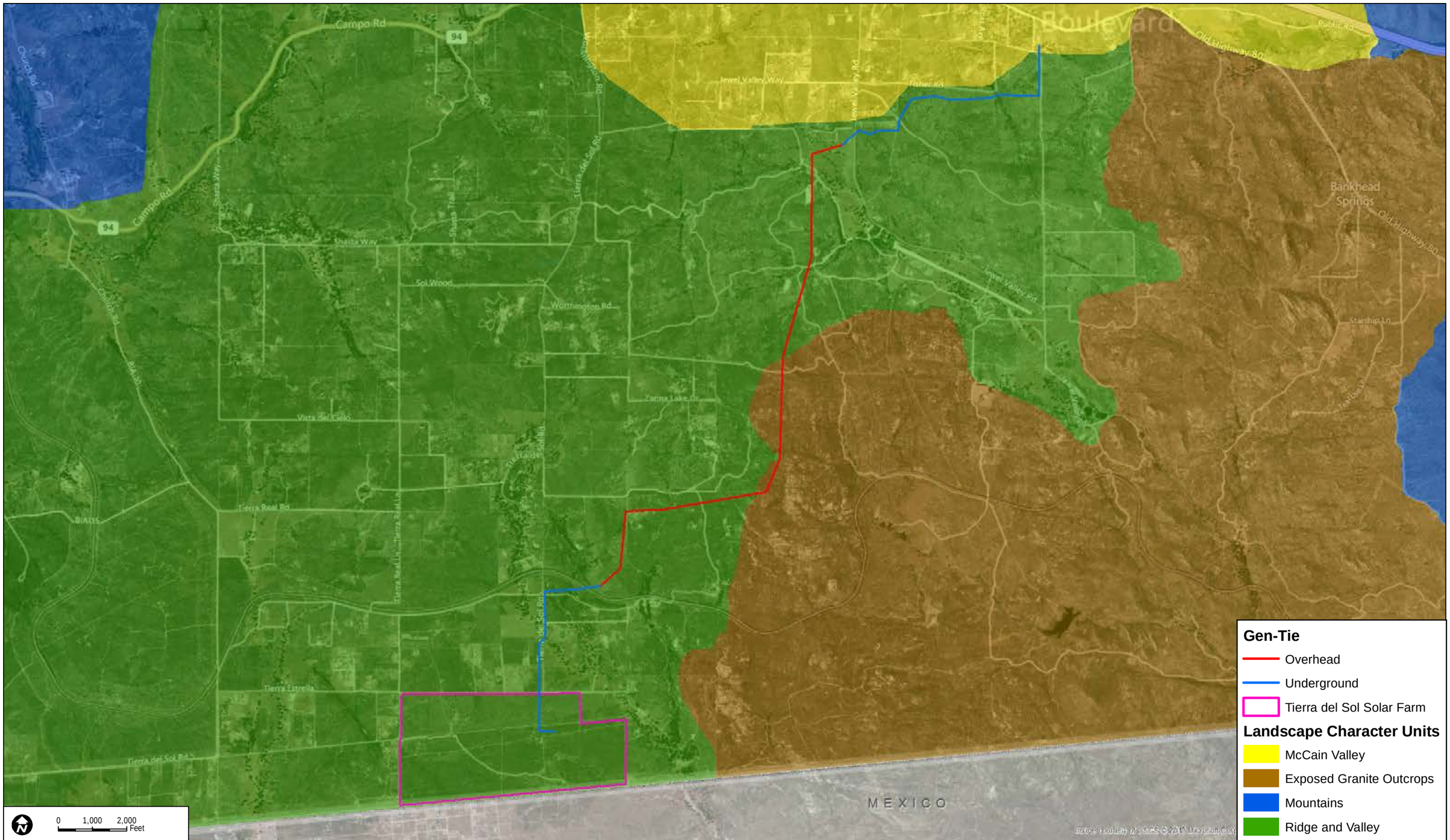

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SOURCE: SanGIS 2012; Bing Maps

FIGURE 7

Landscape Character Units

VISUAL RESOURCES AND AESTHETICS REPORT- TIERRA DEL SOL SOLAR FARM

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Ridge and Valley LCU

The Ridge and Valley LCU encompasses the majority of the project viewshed area and extends across a large area of the Tierra del Sol, Jewell Valley, and Boulevard landscape (see Figure 7). This LCU is typified by low, broad ridges that trend in a north-south direction and separate similarly shallow, broad valleys that gently slope to the south. These interconnected landforms create a gently undulating landscape.

In the LCU chaparral vegetation is relatively dense on the ridgelines and on side slopes. The chaparral is a fine-textured vegetation with an overall olive green color. Breaks in the continuity of vegetation are common and largely due to the presence of light-colored unpaved access roads as well as regional and local electrical infrastructure. Taller vegetation in the valley bottoms consists of clumps of oak woodlands that exhibit a relatively coarse texture and dark green color and understory grasses and low growing shrubs that are typically of a light brown or tan hue. Exposed soils of this LCU are light-colored decomposed granite associated with ridges and slopes, and more tan in color in valley areas where organic matter is a larger component of the soil.

The primary modifications in the Ridge and Valley LCU are rural residences, ranches, and access roads which are dotted throughout and traverse the landscape and contribute a variable and patchy visual pattern to the otherwise rural and natural character of the area. In addition, several tall, steel lattice structures associated with the 500 kV Sunrise Powerlink transmission line are located in the southern extent of this LCU (four structures are located within the solar farm site boundary) and several tall and thin meteorological towers are located in the central extent of this LCU near Jewel Valley Road.

Exposed Granitic Outcrops LCU

The exposed granitic outcrops LCU exhibits definite forms and light colors east and west of the Ridge and Valley LCU area (Figure 7). Granite boulders contribute contrasting yet distinct natural elements to the landscape. For example, the off-white and slightly red-yellow hue color of boulders contrasts with the muted dark green hues of surrounding chaparral vegetation and the prominent ridgeline and higher elevation location of boulders makes these locations and features clearly visible and apparent. The topography of the area is variable but the unit includes consistently long and clumped groupings of boulders and rocks. Ridgeline boulders create undulating lines that follow slope contours and skylined, silhouetted features that are visible against the blue sky or distant dark brown and grey mountains. Rock outcrops are commonplace throughout the region, however; the concentration of outcrops in and

around Rattlesnake Mountain creates a visually distinct landscape that is distinguishable from occurrences elsewhere in the area.

While the exposed granitic outcrops LCU is generally void of modifications, the San Diego and Arizona Eastern railroad and numerous unimproved dirt access roads traverse the central and southern extent of the landscape unit. In addition, the international border fence delineates the southernmost extent of the LCU.

McCain Valley LCU

The McCain Valley LCU is characterized by low, rolling chaparral hills, with some boulders and other rock outcrops dotting the landscape. The vegetation generally consists of low shrubs, grasses, and other typical desert species. Large oak trees add a vertical dimension to a landscape that is otherwise dominated by low vegetation. The portion of the LCU located south of Interstate 8 (the LCU extends to the north of the interstate and encompasses the McCain Valley landscape) is more pastoral and less rugged than undeveloped areas to the north and includes the rural community of Boulevard and the Old Highway 80 corridor. Colors in the unit tend to be muted and dominated by shades of tan and green, although some vibrancy is introduced from reds, oranges, and other warm colors resulting from seasonal changes in vegetation.

Mountains LCU

The landscape features comprising the Mountains LCU consist primarily of domed to pyramidal ridges and intervening valleys. The mountains in this unit range in elevation from approximately 3,000 –4,500 feet and enclose the McCain Valley. Cultural modifications or other human disturbances are minimal in the Mountain LCU, likely because of topographical constraints, though the Interstate 8 highway corridor and other roads do bisect the unit.

Silhouettes of domed to pyramidal ridgelines against the expansive desert sky in is relatively commonplace in this LCU. The boundary between the Mountains LCU and McCain Valley LCU is primarily defined by transitional slopes, periodic rock outcrops, and slight variations in vegetation density as the mountain landscape tend to be more sparsely vegetated than the valley. The texture of the Mountain LCU is moderately coarse, with some smooth patches formed by breaks in the vegetation and rock outcrops. Colors in this LCU tend to be muted, with tans, grays, and greens of vegetation and exposed soils dominating the unit.

5.0 EXISTING VISUAL RESOURCES AND VIEWER RESPONSE

5.1 Existing Visual Resources

5.1.1 Visual Character

The existing visual character of the project area is rural with some urban, industrial elements as previously described. The Tierra del Sol, Jewel Valley, and Boulevard area landscape consists of widely dispersed rural residences on large lots routinely located next to undeveloped, gently rolling terrain featuring varying densities of vegetative coverage. Residential structures are generally modest and are typically surrounded by the rectangular form of cleared lands used for ranching and other rural activities. The topography of the area is variable and includes broad ridges, shallow valleys dotted with oak trees and traversed by dry creek beds, and gently sloping chaparral-covered terrain. Mobility in the area is achieved by use of several north-south roadways including Tierra Del Sol Road and Jewel Valley Road and by use of State Route 94 and Old Highway 80, the main east-west thoroughfares in southeastern San Diego County. In addition to rural residences, wood and wire fencing delineating property boundaries is commonplace in the landscape as is local electrical and communication infrastructure. Regional electrical infrastructure and the international border fence traverse the southern extent of the project area landscape and contribute contrasting forms, lines, and colors to the Tierra Del Sol visual setting. Several meteorological towers have also been installed in the project area and while these features encompass tall forms and smooth textures, the towers are temporary and have a relatively thin profile and a scattered disposition in the landscape (towers tend to not be clumped in one location).

Representative photographs of the visual character of the project area are included in Attachment A, Representative Photos of the Project Site and Surrounding Area.

5.1.2 Visual Quality

More so than residential structures and regional and local electrical infrastructure, the natural landforms, soils, and chaparral vegetation in the Tierra del Sol, Jewel Valley, and Boulevard communities typify the visual quality of the project viewshed. Two distinct LCUs, the Ridge and Valley LCU and the Exposed Granitic Boulders LCU, were identified in the project area during preparation of this report and two additional LCUs (the McCain Valley LCU and the Mountains LCU) occur in the area and were identified during preparation of the Rugged Solar Farm Visual Resources Technical Report (Dudek 2013). A discussion of the visual quality as it pertains to the vividness, intactness, and unity associated with each unit identified in the project area is provided below.

Ridge and Valley LCU

The Ridge and Valley LCU is primarily comprised of muted earth tone colors personified by the dark green and greys of chaparral vegetation and the sand-color tinged exposed soils created by the development of access roads and paths. In addition, the light brown color of low grasses in open valleys and the dark green foliage of oak trees represent the colors associated with the valley landscape. The vividness of this LCU is considered moderate. The predictability of the rural residential development pattern and lack of particularly memorable or dramatic landscape features near the solar farm site affects the overall land cover vividness; however, the juxtaposition of broad valley and chaparral-covered ridgeline landscapes in the Jewel Valley area creates a distinct visual pattern of contrasting form, line and color that is relatively diverse. With the exception of regional electrical infrastructure traversing the southern extent of the LCU, manmade development (i.e., residences, local electric and communication infrastructure) in displays a rural character and scale that does not dominant the landscape.

Visual intactness of the LCU is considered moderate. Natural vegetation, topography, and man-made features are evident in the landscape and the juxtaposition of the various forms, lines, and colors of these elements are often replicated within the larger subtext of southeastern San Diego County. Further, the natural and built environment is routinely a composite of regional and local electrical and communication infrastructure (and roads) viewed against the backdrop of chaparral, and boulder covered terrain (visual contrast often results because of this association of natural and built features in the landscape). For example, when viewed at foreground viewing distances, the bold, prominent form and vertical line associated with regional electrical infrastructure contrasts with the low form and flowing horizontal line associated with chaparral vegetation and infrastructure is viewed as an encroaching element in the landscape. On the other hand, when viewed at middleground or background distances, the visual contrast is less apparent because views become broad and the visual prominence of built features is reduced. Therefore, because the LCU comprise a large land area in which foreground to background views of the natural and built elements in the landscape are available, intactness of the LCU is considered moderate.

Lastly, visual unity is considered moderate to moderately high as the predominate man-made features in the landscape (low density rural residences) are well integrated with the surrounding natural vegetation and landforms, resulting in coherent visual pattern void of chaos and "jumbling." With the exception of regional electrical infrastructure that displays tall, prominent forms and vertical lines, the visual resources of this LCU are not generally encroached upon by strongly contrasting features.

Exposed Granitic Outcrop LCU

The vividness of visual resources within the LCU is considered moderately high. The LCU is comprised of off-white and dullish grey boulders and rocky landforms set in a matrix of olive green chaparral vegetation. Landscape components within the LCU are limited to boulders, rocky landforms and chaparral vegetation and while the rounded form of boulders contrasts with the rugged form and undulating line of chaparral vegetation, the juxtaposition of pattern elements is harmonious and the continuity and dominance of these features creates a distinct visual pattern. In addition, the off-white to dull grey color of boulders and rocks are often viewed against the backdrop of the large, light blue sky and this striking view tends to draw the attention of viewers.

The distribution of boulders and rocks atop ridgelines is commonplace in the larger context of southeastern San Diego County and therefore, the amalgamation of these landscape components does not produce a particularly unique and memorable visual experience. Although man-made development including regional electrical infrastructure and the San Diego and Arizona Eastern railroad is located in the southern and central extent of this LCU, landscape components within the unit are primarily natural and the landscape is generally free from encroaching elements. Therefore, visual intactness is considered moderate.

Similarly, the LCU is characterized by a relatively consistent visual pattern including the off-white color and spherical form of boulders, dark, olive green color and rugged form of chaparral vegetation and limited occurrences of man-made development. The natural elements tend to dominate the landscape and when combined with several steel lattice support structures associated with regional electrical infrastructure and a relatively short-segment of railroad (although man-made the railroad embodies a particularly rural character), a coherent visual pattern emerges. Therefore, visual unity is considered moderately high.

McCain Valley LCU

South of Interstate 8, southerly oriented views from within the McCain Valley LCU are generally limited in extent by gently rising terrain and the clumping of tall, mature oaks trees adjacent to the Old Highway 80 corridor. However, south of State Route 94 and Old Highway 80, the visible landscape from Tierra Del Sol Road and Jewel Valley Road becomes broad and distant views to the east, south and west are generally available. The landscape however is relatively repetitive and is partially defined by the horizontal form and rough texture of chaparral vegetation and the lightly colored stripes of exposed soils created by the development of access roads. Vertical man-made development is present along roadways and consists of local electrical and communication infrastructure. Rural residences are modest and are scattered about the landscape. Given the largely monochromatic palette and visual pattern and the lacks of memorable visual features, the vividness or distinctiveness of the landscape is moderate.

South of Interstate 8 the McCain Valley LCU generally lacks conflicting vertical elements or features that could be considered eyesores. Man-made development is generally located along the Old Highway 80 and local area roadways and homes, business and local infrastructure displays a consistent rural scale and character. Several meteorological towers are located south of State Route 94 and Old Highway 80 and while these structures exhibit tall forms and vertical lines that contrast with the form and lines of existing electrical and communication infrastructure, the lattice construction and narrow form of these features reduces their visual prominence in the landscape and the overall volumes of towers is limited. Despite the general lack of encroaching features in the portion of the LCU located south of Interstate 8, the northern extent of the LCU includes Interstate 8, large steel lattice transmission structures associated with the Sunrise Powerlink and the 25-turbine Kumeyaay Wind Farm which do tend to encroach on the otherwise natural and rural character of the landscape. Therefore, with consideration given to the entirety of the LCU, visual intactness is considered moderate to moderately low.

While the Sunrise Powerlink and other cultural modifications located north of Interstate 8 tend to encroach on the landscape and introduce visual contrast in terms of form, line, color and texture, the unity of the landscape as viewed from locations south of the interstate relatively coherent. Views of regional infrastructure and the Kumeyaay Wind Farm from the southern portion of the LCU are generally limited to higher elevation viewing locations bordering the Ridge and Valley LCU. Along the Old Highway 80 corridor, the presence of tall, mature oak trees and gently sloping terrain to the south limits opportunities for distant views. In addition, the undulating lines displayed by gently rolling hills covered with dense chaparral vegetation and occasional denuded washes in lower lying valley areas contribute interesting line, textures and colors to the landscape. And with the exception of tall meteorological towers that rise abrupt in the landscape, man-made development is generally located adjacent to local areas roads and displays a rural scale and character. Therefore, with consideration given to the entirety of the LCU, unity is considered moderately high.

Mountains LCU

South of Interstate 8, the Mountains LCU is comprised primarily of sloping foothills and higher elevation terrain areas that create a strongly defined eastern horizon line. Expansive views of the McCain Valley and surroundings are regularly available from within the Mountains LCU. The undulating form and rugged line of local ridgelines creates visual interest in the landscape and a relatively striking visual pattern when viewed in the context of the surrounding visual patterns of exposed granite boulder outcrops and low valleys and ridges covered by dense chaparral vegetation. The tall form and complex lines of steel lattice structures associated with the Sunrise Powerlink traverse the eastern extent of the LCU depicted on Figure 7, cross the interstate and continue along McCain Valley Road into the McCain Valley area. In addition, the tall form, bold

vertical line, industrial scale and continual movement of wind turbines atop the Tecate Divide are also located in the Mountains LCU and affect the vividness of the largely high relief LCU. Overall, with consideration given to the entirety of the LCU, the vividness or distinctiveness of the landscape is assessed as moderately low and similar to other areas in the region.

Man-made development within the Mountains LCU includes wind turbines situated atop Tecate Divide, numerous steel lattice structures associated with the Sunrise Powerlink Project, meteorological towers, rural residences, commercial business and rural residences. Due to their large form, industrial bulk and scale, and prominent location on higher elevation areas (wind turbines in particularly), wind turbines and steel lattice transmission structures could be construed as eyesores and encroaching elements in the landscape. While these vertical features conflict with the rural and natural character of the surrounding areas, higher elevation mountains and ridgelines provide visual interest and a slight diversion from views of man-made development. Accordingly, visual intactness within these LCUs is considered moderate.

Paired with the surrounding rolling hills and more distant mountains, vegetation and areas of exposed soil within the Tule Wash unite to create a moderately coherent visual pattern of natural element north of Interstate 8. South of Interstate 8, the unity of Mountains LCU is strong as man-made development is limited and natural elements (undulating ridgelines covered with green-brown chaparral vegetation) display a harmonious visual pattern. In addition, nearby hills and higher elevation mountains provide a variety of scale and diversity to the LCU. However, several cultural modifications encroach on the landscape (most notably McCain Valley Road, Sunrise Powerlink, and the Kumeyaay Wind Farm) and interrupt the overall unity of the landscape. Still, visual unity is assessed as moderate to moderately high.

5.2 Viewer Response

Viewer response is based on several factors including viewer sensitivity, viewer groups, viewer exposure, and viewer awareness. Each of these factors influences how a viewer might respond to a change or changes in the environment and in particular to changes involving development of a site from a natural, undeveloped state. Each factor contributing to viewer response is discussed in greater detail below.

5.2.1 Viewer Sensitivity

Over a period of months, the proposed project has been presented to the Boulevard Community Planning Group. Although the project site is primarily located outside of the Boulevard rural village area, the small enclaves of Tierra del Sol, Live Oak Springs, Withcers's Grove and Calexico Lodge are included in the subregional planning area and therefore would be subject to

the policies of the Boulevard Community Plan. Please refer to the Tierra Del Sol Solar Farm Project General Plan Analysis Report that was prepared by County staff. This report lists the relevant policies of the Boulevard Community Plan and details how the proposed project complies and/or conflicts with the Plan.

Although the Planning Group has not yet voted on the project, the concerns of the public and the planning group have been submitted and the project has been included on the Boulevard Planning Group Agenda on several occasions. In addition, the project has been profiled in the local East County Magazine. Concerns include project generated glare and potential impacts on surrounding residents and airplane pilots and the removal of "backcountry habitat" and vegetation from the site and replacement with a large solar farm facility. Some community members have also expressed a preference for rooftop and parking lot solar energy installations as opposed to large-scale solar farm facilities. In addition, anticipated concerns include the visual contrast created by vegetation clearing, the rectangular form and light colored surface of CPV trackers, and the introduction of tall gen-tie support structures atop prominent ridges in the local area. County policies included in local and regional planning documents (i.e., the Mountain Empire Subregional Plan, Boulevard Community Plan, and the County of San Diego General Plan Conservation and Open Space Element) support the protection of existing visual resources. Therefore, a high level of visual sensitivity in the surrounding communities of Tierra del Sol, Jewel Valley, and Boulevard is assumed.

5.2.2 Viewer Groups

Viewer groups analyzed in this study consist of individuals that frequent public viewpoints with in the project viewshed. Two user groups, residents and motorists, were identified and analyzed. A third viewer group, trail users, was considered but ultimately rejected due to the lack of public right-of-way for the trail network envisioned in the Boulevard Community Trails and Pathways Plan and the subsequent lack of formal dedication of trails and establishment of trail facilities.

While there are no known designated recreational areas in the project viewshed, several proposed trails identified in the Boulevard Community Trails and Pathways Plan are located in the Tierra Del Sol area. The Lansing, Tierra del Sol, SD&AE Railway, and Shocking Truck Trails are proposed east-west multi-modal compacted dirt facilities that traverse the Tierra Del Sol landscape. While the identified facilities have been included in County planning documents (i.e., the Boulevard Community Trails and Pathways Plan, a community specific appendix to the County Trails Master Plan) the County does not presently have the required easements over the entirety of the proposed trail alignments to provide the public with the envisioned connected trail network. In addition, as stated in the Boulevard Community Trails and Pathways Plan, the proposed trails identified on the Boulevard Community Trails Map depict "corridors of general

alignments…used to describe the general location of a future trail within a designated corridor" (County of San Diego 2005). In other words, the specific alignments for trails will be determined later during the review and approval process and in several instances, the proposed trail corridors traverse private property, existing paved roadways, and existing railway right-of-ways. Therefore, while proposed trails are located in the Tierra Del Sol landscape, at this time they are informal facilities and considered outside of the public realm as none have been improved and all exist in their natural state as existing access roads. As such and for purposes of this analysis, users of proposed trails in the project area are not considered.

Solar Farm Site

Residential Groups

Approximately seven residences are located on parcels north of Tierra del Sol Road and the solar farm site and five residences are located on parcels adjacent to the western boundary of the project site. More distant residences are located in the project viewshed and have varying levels of the visibility to the project site due to intervening topography and vegetation and due to building orientation. Although views from private residences are not analyzed in CEQA, local residents experience views of the project site from public viewpoints in close proximity to their homes such as at the transition from private driveways to public streets. Therefore, residents are considered in the current analysis. In addition, residents make up the majority of motorists travelling on project area roads such as Tierra Del Sol Road because these roads provide local access to residences as opposed to regional access (i.e., Old Highway 80 and SR-94) to the larger Mountain Empire Subregion and beyond. Motorists are further analyzed and discussed below.

Motorists (Mobile Groups)

The presence of Tierra del Sol Road in the project area viewshed suggests that mobile viewers (i.e., motorists) should be considered in the discussion of viewer groups in the project area. However, motorists on this roadway are anticipated to be comprised entirely of local residents in the immediate area because, as discussed above, Tierra del Sol Road is not a regional transportation facility (i.e., SR-94 and Old Highway 80, both of which are located outside of the viewshed). Rather, Tierra Del Sol Road provides local access through the community of Tierra Del Sol and numerous access roads leading to residences are constructed off the roadway. Therefore, for the purposes of this study, motorists (mobile groups) are assumed to be generally comprised of the same individuals considered in the residential groups.

Gen-Tie Line

Residential Groups

As stated previously in Section 2.1 Land Use Designations and Zoning, the gen-tie line would traverse approximately 15 parcels owned by 10 property owners. In the project area, residences are generally concentrated near Tierra Del Sol Road and the underground gen-tie alignment north of the solar farm site, along Jewel Valley Road near the transition pole (approximately 10 residences are located in the general area), and near the proposed interconnect at the rebuilt Boulevard Substation. In addition to those residences located on parcels adjacent to the gen-tie alignment, the vertical profile and prominent location of gen-tie structures would result in a relatively wide and expansive viewshed encompassing numerous residences in the Tierra Del Sol and Jewel Valley areas. The majority of residences in these areas are located off Tierra Del Sol Road, Jewel Valley Road, and Old Highway 80.

Motorists (Mobile Groups)

Transportation facilities located in the viewshed of the gen-tie line primarily consist of local roads. Motorists on north-south roadways including Tierra Del Sol Road and Jewel Valley Road would be afforded brief, passing views of the gen-tie line and structures. Small dirt roads traversing the Tierra Del Sol and Jewel Valley landscapes are also included in the viewshed and motorists on these facilities would be afforded brief, momentary views of project components. Undergrounding the gen-tie line between Jewel Valley Road and the rebuilt Boulevard substation would avoid the placement of tall gen-tie structures of along a relatively prominent topographic contour (3,640 feet in elevation) east of Jewel Valley Road and would limit the northern and eastern extent of the gen-tie viewshed.

5.2.3 Viewer Exposure

Solar Farm Site

Several residences located north of the project site are afforded direct, unobscured views of the proposed solar farm site. Due to the topography of the site, residents located to the west are afforded direct views of the west side of the proposed site when leaving their properties (i.e., when entering the public right-of-way). Viewer exposure to the east side of the site is limited due to a lack of public viewpoints and intervening topography comprised of the north-south trending ridge traversing the western portion of the project site. Residents located elsewhere in the viewshed are afforded distant yet relatively unobscured (albeit depending on the presence of vegetation and topography) views of the proposed site at a middleground viewing distance. Table 2 summaries the view duration for foreground and middle ground views available from selected key views/public viewing areas.

Table 2
Summary of Viewer Exposure – Solar Farm Site

Key View Present	View Zone	View Distance	Assumed Travel Speed	View Duration
1	Foreground/Middleground	0.25-1.0 mile	35 MPH	1.3 minutes (77 sec)
2-3	Foreground	<0.25 mile	35 MPH	2.2 minutes (133 sec)
4	Foreground/Middleground	0.25-1.0 mile	35 MPH	0.7 minute (42 sec)
5	Middleground	>1.0 mile	35MPH	Intermittent, < 10 sec

The viewer experience from selected Key Views is characterized by view zones (view distance). Key views 2 and 3 are in the foreground view zone. The entire length of Tierra del Sol Road between these two points and extending one-quarter mile outward to the foreground/middleground boundary can be considered as a single experience. When considering the dynamic experience of the viewer, the entire length of this road represents a single viewing experience no matter the travel direction. Key Views 1 and 4 are located in the middleground view zone and represent distinctly separate experiences, but afford continuous views of the Project. For motorists within the Project viewshed driving southbound on Tierra del Sol Road, middleground (extending from Key View 4 to 2 miles from the Project) and Background views (>2 miles from the Project) are intermittent and fleeting (< 10 sec.) due to topography and existing vegetation that screen potential project views for most of the distance between SR-94 and Key View 4.The western terminus of Tierra del Sol Road is located approximately 1 mile west of the project site. With the exception of SR-94 and Old Highway 80, which are located north of the project site and are outside of the solar farm site viewshed, Tierra del Sol Road does not provide connectivity to other roads in the area which would facilitate regional movement or use. As such and as discussed previously, mobile viewers on the roadway are anticipated to reside in the immediate area and the exposure of mobile viewers would be similar to that of residential viewers.

Gen-Tie Line

For purposes of this analysis, viewer exposure associated with residents is considered permanent and long term and exposure to motorists is a function of intervening vegetation and topography and motorists speed. And while numerous small roadways are included in the viewshed of the gen-tie line, larger roads receive greater and more consistent traffic volumes and therefore, the visual experience/exposure of the gen-tie line to motorists on Tierra Del Sol and Jewel Valley Road is discussed below.

East/northbound motorists on Tierra Del Sol Road would be located within the gen-tie line viewshed from the highpoint of the north/south trending ridge that traverses the western portion

of the solar farm site and the roadway to the San Diego and Arizona Eastern railroad crossing. The traveling distance between these points in the landscape is 1.2 miles along Tierra Del Sol Road and assuming a travel speed of 35 miles per hour, motorists would be afforded middle- to foreground views of the gen-tie line for approximately 2 minutes. For southbound Tierra Del Sol motorists, the topography of the surrounding landscape is variable and intervening vegetation creates discontinuous segments of the roadway from which the gen-tie line would be visible. According to the viewshed analysis, approximately 1.93 miles of the southbound travel lane of Tierra Del Sol Road would be located in the viewshed of the gen-tie and southbound motorists would be afforded foreground to middleground distance views of the gen-tie line for approximately 3.3 minutes. An approximate 0.80 mile linear segment of the roadway through the community near Tierra Real Road is not included in the view duration approximation as the landscape along this segment is enclosed by surrounding vegetation.

A summary of viewer exposure from major public roadways in the gen-tie viewshed is provided in Table 3.

Table 3
Summary of Viewer Exposure – Gen-Tie Line

Road	View Zone	Assumed Travel Speed	Potential View Duration	
			SB/EB	*NB/WB*
Tierra Del Sol Road	Foreground/Middleground	35 MPH	3.3 minutes (199 sec)	2 minutes (123 sec)
Jewel Valley Road	Foreground/MIddleground	35 MPH	2.3 minutes (136 sec)	3.9 minutes (235 sec)

Note: Potential view duration reflects consideration of the topographic viewshed and does not consider potential screening effects of existing structures and vegetation along roadway segments or at viewpoint locations. Rather, the topographic viewshed is a function of the assigned height of the gen-tie structures and the existing topography in the area.

5.2.4 Viewer Awareness

Due to the permanent nature of views, the existing natural state of the project site, and the familiarity with the local area landscape, residents and local area motorists in the immediate area are anticipated to be highly aware of changes occurring in the existing landscape setting. On the other hand, commuters and other motorists passing through the region on Interstate 8 may not be as sensitive to changes in the environment and the addition of several gen-tie structures to a relatively unfamiliar landscape may not "register". However, for purposes of this study, viewer awareness is anticipated to be high based on the characteristics of the existing rural environment and the expressed and anticipated concerns of the community.

6.0 VISUAL IMPACT ASSESSMENT

The visual impact assessment utilizes visual simulations of the proposed project from Key Observation Points (KOPs) to analyze the level of visual change and overall effects to visual resources within the project viewshed. The KOPs are essentially static images of the area that are selected based on proximity to likely viewer locations. Visual resources are experienced in a dynamic condition as people move through the environment. This dynamic experience forms human perception of surroundings and perception can be modified by many variables such as viewer activity (driving, work activities, recreational activities, etc.). For renewable energy projects, political and economic values can modify personal attitudes toward visual change when the project represents a valued goal. However, these attitudes are more difficult to assess and the acceptable balance between personal lifestyle and larger economic themes is not easily weighed.

This visual impact assessment focuses on the dynamic experience that will be associated with the proposed project and utilizes KOPs simulations to inform the analysis. However, other factors that modify perception and public attitudes are considered in order to reach conclusions regarding visual resource impacts and potential significance. The potential effects of the project on visual resource are evaluated for each KOP in the context of the overall LCU and how viewers experience and form perceptions of the visual resources through a experiential process.

6.1 Guidelines for Determining Significance

The County of San Diego Guidelines for Determining Significance and Report Format and Content Requirement for Visual Resources (County of San Diego 2007) and Dark Skies and Glare (County of San Diego 2009) were reviewed to determine the applicable significance thresholds for the Proposed Project. According to the County of San Diego Guidelines for Determining Significance, a project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary:

- the project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines;
- the project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings;

- the project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
  - a public road,
  - a trail within an adopted County or State trail system,
  - a scenic vista or highway, or
  - a recreational area.
- the project would not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning.
- the project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color, that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties.

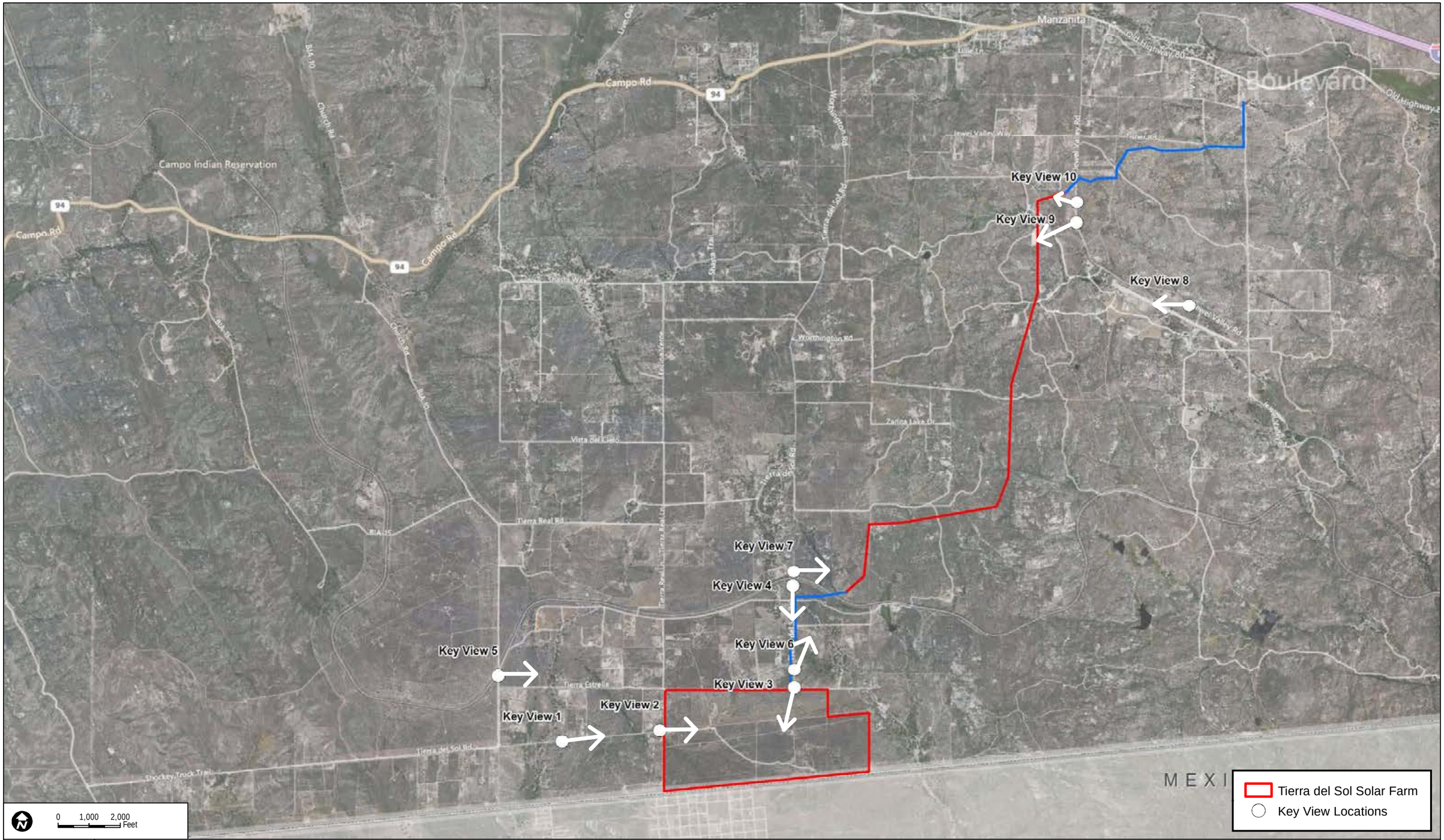
6.2 Key Views

Methodology

Key views of the project were selected that would typify the effects on visual resources as experienced by a range of expected viewers in a dynamic experiential setting. Locations in the project viewshed from which views of the proposed project site would be available were identified on aerial photography prior to the initial site visit. Once identified, candidate key view locations were field verified to confirm orientation and visibility to the proposed project site. Initial locations were modified and/or new locations were established based on field conditions. Photos from each candidate key view location were taken and the existing conditions including time of day, weather, vegetation, topography, visual character, quality, response and exposure were noted and recorded.

Ten of the candidate key views were submitted to the County of San Diego for review and were approved for use in this visual resource assessment (Figure 8). The selected key views in the analysis are representative of views to the project site in the viewshed LCU and consider the views of various viewer groups at various viewing angles at both foreground and middleground viewing distances.

Consistent with visual resource reports prepared for other energy-related discretionary projects in the County of San Diego, a numerical rating for each contributing factor (vividness, intactness and unity) to visual quality at each representative key view is provided below. A rating scale of 0 to 5 is used with a rating of 0 equating to a landscape with an utter lack of vividness, intactness or unity and a rating of 5 describing a highly vivid, intact, and unified landscape. Ratings are provided for each individual contributing factor of visual quality.



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SOURCE: SanGIS 2012; Bing Maps

FIGURE 8

Key View Locations

VISUAL RESOURCES AND AESTHETICS REPORT- TIERRA DEL SOL SOLAR FARM

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In regards to the gen-tie line, the key view analysis presented below is limited to consideration of gen-tie structures and lines. Access roads and cleared areas associated with individual gen-tie structures have not been incorporated into the visual simulations and therefore, the resulting visual quality associated with these features from key view locations is not discussed. As such, additional mitigation measures may be required to address the potential significance of visual contrast associated the development of access roads and individual building pads for gen-tie structures.

Key View #1 – Existing Conditions

Orientation

KOP 1 provides a representative view for eastbound motorists on Tierra del Sol Road (Figure 9). The key view is at an approximate elevation of 3,515 feet. The project site rises 135 –230 feet (high point of the project site is approximately 3,745 feet) at approximately a 5% slope gradient and the western boundary of the site is located approximately 0.6 mile away.

Visual Character/Quality

As shown in Figure 9, the view from Key View 1 is characterized by the seemingly smooth textured, grey-colored asphalt surface and dull yellow striping of Tierra del Sol Road which runs eastward towards the low horizon. From this particular vantage point, the roadway appears to bisect a relatively consistent visual pattern featuring the granular and gritty white colored soils of the adjacent right-of-way and the moderately textured, rolling form of light to dark green chaparral vegetation. The road and native vegetation are viewed in the foreground and middleground viewing zones. The terrain slopes gently upward toward the project site. A grove of ornamental trees associated with an old homestead are prominent at the ridgetop. These trees break the otherwise dominant horizontal horizon line.

High voltage transmission lines and lattice towers are visible in the foreground and middleground. These large metallic structures tend to contrast with the bright blue color of the expansive background sky. Lower wooden power or telephone poles parallel the roadway. The height of these poles do not break the horizon line and are less intrusive than the lattice towers. A rectangular residential structure on the horizon is also visible to the north from this key view; however, the largely horizontal form of the structure makes it nearly unnoticeable in the visual landscape.

<u>Vividness (2.0)</u>

The relatively consistent patterns of form, line, color and texture in the foreground of the landscape produce a view, which is not highly memorable. With the exception of the roadway

(which creates a break in the otherwise continuous pattern of native chaparral vegetation) and distant vertical elements including transmission structures and pine trees on the project site, the view is comprised of homogenous elements that are routinely replicated in similar landscapes in the project area. Also, while the horizon is low and provides opportunity for a strongly defined skyline, the topography at the horizon is relatively consistent from north to south and lacks mountainous terrain or similar features which would create visual interest and/or memorability. Vividness of the view is therefore considered moderately low (2.0).

Intactness (3.0)

The natural landscape has been disturbed by the construction of Tierra del Sol Road and the 500 kV SWPL transmission line. While the man-made elements are not considered eyesores in the existing visual setting, they effectively disrupt the integrity of the visual pattern which is relatively consistent on either side of the roadway. The intactness of the view is considered moderate (3.0)

Unity (3.5)

As viewed from this key view, Tierra del Sol Road disrupts the visual pattern by creating a relatively wide, grey-colored break that is accentuated by the light-colored road shoulder soil, which separates the continuity of the dark green vegetation color and texture. However, this break is softened by a rolled curb that lacks shadow and the road shoulder blends effectively with adjacent vegetation to soften the transition from roadway to natural open space. The road generally follows the natural terrain and so brings attention to the rising land toward the project site. The parallel towers and transmission wires provide consistency of lines in the landscape (paving and road shoulder edges) that to a small degree are self-reinforcing visual elements. None of these elements effectively detract from the dominant flat horizon line.

The resulting composition of the view is moderately harmonious: although the natural vegetation is broken by the roadway, continuity on each side of the road is maintained. As described above, lines associated with the roadway are softened by the curb design and there ragged edge created by the interplay between the road shoulder soil and native vegetation. These lines are reinforced by the adjacent transmission lines, towers and wooden poles that travel in a parallel path. The maintenance of an unbroken horizon line provides visual weight and unity to the viewer's experience while traveling this road. The unity of the view is therefore considered to be moderately high (3.5).

Key View 1 - Existing Conditions

Key View 1 - Proposed Conditions, Visual Simulation

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FIGURE 9

Key View 1 - Visual Simulation

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Proposed Project Features

Due to the variation in topography on the project site and the presence of dense off-site vegetation, a limited number of CPV trackers (i.e., those proposed in the western extent of the project boundary) would be visible in the middle-ground at this location. A definite north-south trending ridge is located on the west side of the project site and topography to the east and west of this highpoint gradually decreases in elevation. Therefore, from this location, visible CPV trackers would appear to step towards the ridge and project components located east of the highpoint including the majority of proposed CPV trackers, collector substation, O&M building, and overhead gen-tie line would be obscured from this view because of topography. Visible CPV trackers would be about 0.6 mile from the Key View location.

Changes to Visual Character and Quality

From Key View 1, the existing color, form, and texture contrast resulting from the construction of Tierra del Sol Road and the regional energy infrastructure is visible and contributes to the character and quality of the view (Figure 9). The removal of the pine trees from the ridge top location will result in a highly noticeable change to visual resources from this vantage point. The CPV trackers will form a monolithic mass with moderate texture when viewed at an angle to the CPV rows and/or angled arrays and a coarse texture when rows are viewed at a parallel angle, producing a striped effect within the facility that is visible on the visual simulation. The overall arrangement and massing of CPV arrays is consistent with the horizon and do not disturb this dominant landscape line. However, the irregular horizon line created by the chaparral and pine trees would be replaced with a relatively sharp line created by the tops of the arrays in morning and afternoon hours and a serrated line during mid-day hours when the trackers are viewed at an angle. Based on this analysis, it is reasonable to expect viewers to experience a variety of visual effects that generate different levels of detail during normal daily operations. These changes may create greater viewer awareness due to the dynamic nature of the image of this facility.

The view also contains natural elements consisting of relatively dense strands of green, rough textured chaparral vegetation and the introduction of the Project would contribute contrasting light to dark grey colors and smooth to coarse textures associated with CPV trackers. While the surrounding area exudes a largely natural appearance, the mass of the facility will contrast this overall natural appearance. Although visible CPV trackers would be slightly masked by the ragged edge of existing vegetation, the angular forms, bright color, and reflective surfaces will dramatically contrast with the natural setting. As such, the Project will significantly alter the visual character of this Key View location.

Vividness (2.8)

The Project would have a moderate effect on the vividness of the existing view. Increased or decreased vividness caused by a project can reduce the value of visual resources due to the contrast with the prevailing vividness of the existing landscape character. The introduction of CPV trackers would replace the existing vertical profile of on-site pine trees with a hard-edged horizontal horizon line that will vary in appearance during daily operations. Based on the orientation of the road at Key View 1, it is anticipated that the Project site would be a focal point of attention for motorists traveling east on Tierra del Sol Road. The addition of the project features will increase vividness from this vantage point. The increase in vividness contrasts with the existing visual resource, therefore the Project would have a moderate impact upon the overall vividness of the surrounding landscape.

Intactness (2.5)

At Key View 1, the relatively consistent visual pattern of chaparral vegetation is disrupted by the presence of Tierra del Sol Road and SWPL structures. As shown in Figure 9, a portion of the western side of the Project would be visible in the middleground of the viewshed from this location and detectable project features would introduce additional man-made elements to a landscape containing highly visible and prominent modifications. The middleground view would not affect the relatively continuous form of existing vegetation north and south of Tierra del Sol,

The introduction of the CPV trackers in the landscape would exacerbate the reduced visual integrity and intactness of the view by replacing the natural focal point of the pine trees with a man-made feature that creates a strong perpendicular line to the prevailing parallel lines of the roadway and transmission towers and wires. The additional visual detail created by the variety of angles at which the trackers will be viewed and the visible rows of trackers in the landscape will result in a moderate decrease in intactness.

Unity (1.7)

At Key View 1, the unity of the view is disrupted by Tierra del Sol Road that effectively creates a visual break separating the continuity of the dark green color and gently rolling form of chaparral vegetation. While only the western portion of the project site would be visible from this location, the Project would encroach upon and add additional industrial features (CPV trackers) to the landscape. The horizontal orientation of the facility will contrast with the unity of existing man-made structures (road and transmission lines). The visual image of the overall facility will create a stronger, more pronounced perpendicular line at the horizon. The periodically straight to serrated edge created by the top of the trackers will noticeably contrast with softer existing horizon line created by existing vegetation. Although CPV trackers would be

visible in the middleground of this vantage point and would be less pronounced than if located in the foreground, they would detract from the overall unity of the landscape visible from Key View 1. However, due to the presence of Tierra del Sol and SWPL structures which currently disrupt the existing visual pattern by encroaching upon the landscape, project effects to overall unity are considered moderate.

Viewer Response

Motorists (primarily residents) are the most likely viewers of the Project from Key View 1. While motorists typically have a low sensitivity to visual changes in the environment (based on angle of observation and view duration), residences are assumed to travel along the road daily and because the project site is located on the horizon and will present a variety of visual detail (motorists views to the horizon are clear and uninterrupted due to the alignment of Tierra del Sol Road), they would be continually exposed and their attention drawn to views of the project site. Contrasting project elements and eastern direction of travel will further focus viewer attention on the project area. Therefore, given viewing duration and orientation to the Project in relation to Tierra del Sol Road, viewer awareness of visual change created by the Project from Key View 1 is likely to be high.

Resulting Visual Quality

From Key View 1, the installation of CPV trackers on the western side of the project site would be visible and would introduce an additional industrial feature to the landscape that would contrast with the form and color surrounding natural vegetation. Although project components would be located in the middleground, the horizontal form of the CPV trackers situated on the gently sloping topography of the site would rise above the relatively low form of chaparral vegetation lining Tierra del Sol Road and areas to the north and south. In addition to resulting contrast in form, color contrast from the introduction of visibly lighter tracker components juxtaposed between the light blue background sky and dark underlying vegetation would also occur. Based on the presence of existing cultural modifications that possess visual balance and symmetry in the foreground, and the visual contrast created by the proposed facility, it is anticipated that implementation of the Project would result in a moderate visual impact at Key View 1.

Key View #2 – Existing Conditions

Orientation

KOP 2 provides a representative view for eastbound motorists on Tierra del Sol Road and residents located adjacent to the western boundary of the proposed project site. The key view

faces east and is at an approximate elevation of 3,640 feet. The project site rises 100 feet to the high point of the ridgeline located east of the Key View. This land rises at approximately a 6% slope gradient that is inclined toward the viewpoint. The viewpoint is situated very near the western boundary of the site approximately 0.05 mile (160 feet) away.

Visual Character/ Quality

As shown in Figure 10, the view from Key View 2 is nearly dominated by the curvature of the asphalt surface of Tierra del Sol Road, the adjacent, relatively wide sand-colored and granular textured road shoulder, and native vegetation. The short, rusted poles and branches supporting the inconspicuous barbed wire fence are visible beyond the right-of-way and somewhat blend in with the grey-green color of dry, knee-high shrubs and taller chaparral vegetation. The variable height of vegetation in the landscape creates a flowing, soft and irregular horizon line against a characteristically clear blue sky. The fence, although dilapidated, adds to the rural character of this view. Some trash is visible along the fence line.

Vividness (Rated 2.0)

The vividness of the view is low. The combined natural vegetation, roadway and associated right-of-way (which tend to dominate the view and contribute relatively dull grey and tan colored hues to the visual landscape) create a bland and indistinct visual pattern that is characteristic of the broader ridge and valley upland LCU. The view is characteristic of many of the off-road views of chaparral vegetation that is commonplace. In addition, the view is limited to a foreground viewing distance and the lack of visual diversity and visual interest creates a notably unmemorable view. Therefore, the vividness of the view is rated moderately low (2.0).

Intactness (Rated 3.5)

Intactness of this view is considered to be moderate (3.5) because of the relative representative and consistent character of the view in context with the ridge and valley upland LCU. The visual pattern from this view is that of a series of visual and topographic breaks and transitions: asphalt road to right-of-way, to grey-colored low growing shrubs to moderately tall chaparral vegetation to blue sky. While this organization produces a layered visual landscape, the roadway and right-of-way do not necessarily encroach on the setting and their lines are relatively consistent. Visual features such as the informal fence and angled curb are consistent with the rural character that typifies the ridge and valley upland LCU.

Key View 2 - Existing Conditions

Key View 2 - Proposed Conditions, Visual Simulation

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FIGURE 10

Key View 2 - Visual Simulation

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Unity (Rated 3.2)

Colors visible in the landscape include the flat grey of Tierra del Sol Road, the sand-colored unimproved adjacent right-of-way, the dull grey –brown color of low-growing project site shrubs and finally, the muted greens of moderately tall chaparral vegetation. The transition from color to color can be abrupt between natural and made-made elements. However, at the horizon line, the transitions between vegetation and sky is muted by the ragged edge of vegetation that provides numerous openings for the sky to peek through. The relationships between these visual elements work to produce an un-unified pattern. The lines of the identified features are somewhat consistent and horizontal; however, the textures vary and are not continuous. The resulting visual unity is moderate (3.2)

Proposed Project Features

From this Key View, existing on-site vegetation would be removed, exposing the underlying light sand-colored soil, and CPV trackers would dominate the foreground. Proposed 6-foot tall security fencing around the perimeter of the site would also be visible but use of chain-link would permit visibility of on-site components and therefore, CPV trackers would dominate the view. The closest CPV tracker would be approximately 200 feet away and due to the topography of the site, project features would be visible from this location at an inferior viewing angle. From Key View 2, trackers in the western extent of the project site would follow a regular and linear arrangement as viewed from north to south.

Changes to Visual Character and Quality

As shown in Figure 10, existing on-site vegetation would be removed and the Project would add industrial elements (i.e., CPV trackers) to the existing landscape. As stated previously, the Project would be located in the foreground viewing distance of Key View 2 that is currently dominated by the curvature of Tierra del Sol Road and adjacent dirt and gravel right-of-way as well as by the spreading and relatively low form of chaparral vegetation. Within the LCU, the vegetation is the dominant and most widespread visual feature. With the exception of Tierra del Sol Road, the existing view displays a primarily natural appearance and the addition of CPV trackers to the landscape would alter the overall character of the view.

Vividness (3.5)

From Key View 2, a limited view of the western extent of the project site is provided and the natural and man-made features in the landscape combine to create an overall bold visual pattern that is unique because of the contrast with natural vegetation and man-made features that typify the ridge and valley upland LCU. The Project would effectively alter the existing view by removing natural

elements and replacing them with highly visible industrial elements. The Project would contrast visually in form, line and color with the surrounding primarily natural landscape and therefore, the resulting vividness or distinctness of the landscape will increase to a moderate level (3.5).

Intactness (1.3)

The Project would add continuous lines of 30-foot tall CPV trackers in the immediate foreground that would extend the prominence of built features both horizontally and vertically at Key View 2. The addition of CPV trackers would transform the character of the Project site from natural to an industrial feature that would encroach upon the natural-appearing landscape of adjacent and surrounding areas within the ridge and valley upland LCU. The resultant score for visual Intactness for this Key View is anticipated to be low (1.3).

Unity (1.0)

Because of the proximity of Key View 2 to the project site and the limited view afforded, the Project would be highly noticeable and would dominate the view. The tall form, horizontal lines and smooth textures of CPV trackers would strongly contrast with surrounding natural vegetation and rural residential development on adjacent properties and therefore, the Project would significantly alter the unity of the landscape. The resultant score for visual Unity for this Key View is anticipated to be low (1.0).

Viewer Response

Because Key View 2 is located approximately 0.5 mile east of Key View 1, similar viewers and a similar viewer response in regards to the Project site as previously defined for Key View 1 is anticipated at Key View 2.

Resulting Visual Quality

Although the level of vividness is expected to increase at this viewpoint, the change is not necessarily positive due to decreases in Intactness and Unity. As viewed from Key View 2, the addition of CPV trackers would increase the prominence of the built environment and would significantly alter the overall character of the landscape along Tierra del Sol Road. Based on the substantial anticipated visual change, viewer proximity, and the limited view afforded at Key View 2 (as well as a lack of intervening structures or vegetation that would screen views of CPV trackers), implementation of the Project would result in a high visual impact.

Key View #3 – Existing Conditions

Orientation

KOP 3 provides a representative view for Westbound motorists of Tierra del Sol Road as well as residents located immediately north of the proposed project site. The key view is located at an approximate elevation of 3,615 feet and the view faces west-southwest. The project site rises 5–125 feet to the west-southwest at a slope gradient of approximately 4%. The northern boundary of the site is located approximately 0.02 mile (80 feet) away.

Visual Character/ Quality

The view from Key View 3 contains two primary visual focal points: the terminus of Tierra del Sol Road at the western horizon line and the small grouping of pine trees and a lattice transmission tower grouped near the ridgeline on the project site in Figure 11. Native vegetation dominates the view out to the southwestern horizon line where the clumped texture and dark-green color of pine trees and a lattice tower break the otherwise uniform horizon line. These landscape features create a rugged yet continuous visual form across the landscape that is typical of the ridge and valley LCU. The roadway as well as the distant 500 kV SWPL transmission structures and distribution line structures adjacent to Tierra del Sol Road create breaks in the visual continuity. The visible lines from this view are largely horizontal; however, the vertical form of transmission structures and trees create some level of variety. The texture of vegetation, Tierra del Sol Road, and the right-of-way soils are relatively rough and are harmonious with the landscape topography.

Vividness (Rated 3.4)

As noted above, several transmission structures are silhouetted against a blue sky backdrop and the resulting visual pattern of foreground vegetation and the large, angular forms of lattice towers is not overly distinct for the project area and surroundings. This view includes a small cluster of pine trees on the project site that also happen to be silhouetted and help to create a distinct skyline in the area. The memorability of the view is however hampered by the presence of the distribution line in the immediate foreground as it tends to steer focus away from the pine tree cluster. With that being said (and in the context of the overall LCU) Key View 3 is considered to have moderate vividness (3.4).

Intactness (Rated 3.5)

From Key View 3, several large-scale encroaching elements are visible in the landscape: the angular and bold form of the 500 kV SWPL lattice towers and low hanging wires on the project site and the vertical and horizontal lines associated with distribution lines running parallel with

Tierra del Sol Road to the west. Although these features are relatively commonplace in this area of the County, the features slightly reduce the intactness of the landscape and introduce visual breaks on the horizon line. Intactness, therefore, is considered moderate (3.5).

Unity (Rated 3.2)

The repetitive pattern of chaparral vegetation and Tierra del Sol Road is consistent with the rural landscape of the ridge and valley LCU. The vegetation helps to blend the road shoulder and creates a soft edge. The sky extends down to a low horizon line due to the low stature of the chaparral vegetation. Sharp contrasts in form and line between transmission structures and vegetation are apparent and create distinct visual features in the landscape. The overall composition is moderately unified but contains some contrasting visual elements. Therefore, unity is considered moderate (3.2).

Proposed Project Features

Proposed trackers and ancillary equipment dominate the foreground from this Key View and due to view orientation (a generally southwestern direction), the collector substation and gen-tie would not be visible. The closest tracker would be approximately 80 feet from the Key View and the height of trackers suggests that Project components would be clearly observable from an inferior viewing angle. In addition, proposed fencing would surround the site and be adjacent to Tierra del Sol Road. A public pedestrian trail proposed by the project would be visible within the area between the Tierra del Sol paving and the project fence. Lastly, site preparation and fire prevention measures would entail the removal of all existing on-site chaparral vegetation and pine trees.

Changes to Visual Character and Quality

While implementation of the Project would result in the installation of 2,657 trackers, the bulk and scale of trackers closest to the Tierra del Sol Road would partially obscure more distant trackers to the southwest and west of Key View 3. Rows of trackers would be located along Tierra del Sol Road in the foreground viewing distance at this location, on a 4% slope that is inclined to the viewer. The continuous form of dark green to grey-colored chaparral vegetation will remain on the north (right) side of the road and be replaced with the trackers on the south side. The vertical form of lattice towers and transmission wires will be screened by the trackers. The addition of trackers and ancillary equipment would increase the level of urban/industrial elements in the landscape and would contrast with native vegetation and rural houses on the north side of Tierra del Sol road within this Key View. The resulting visual elements of the project would alter the overall character of the area as viewed from Key View 3.

Key View 3 - Existing Conditions

Key View 3 - Proposed Conditions, Visual Simulation

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FIGURE 11

Key View 3 - Visual Simulation

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Vividness (4.5)

The addition of Project components would effectively remove all existing natural features from the site and would replace them with a relatively wide and long expanse of urban/industrial elements. The rows of trackers would be visible from Tierra del Sol Road and a visual pattern will be evident for viewers in motion, similar to the effect of passing rows of tree in an orchard. The resulting view would be dominated by Project components and visual contrast with the natural appearance of off-site areas and the overall ridge and valley LCU would be readily apparent. The introduction of tall, geometric forms and grey colors of trackers as well as the regular, horizontal lines created by the installation of trackers rows would contrast visually in form, line, and color with the existing natural setting of the site. These dominant, contrasting visual elements located in the foreground view will increase vividness to a moderately high level (4.5)

Intactness (1.2)

The addition of trackers would effectively industrialize the project site. The essential appearance and character of the area would be noticeably changed and industrial project components would encroach on the natural appearance of the surrounding landscape which includes rock outcrops, relatively dense chaparral vegetation, rolling hills and an open, relatively natural skyline. The project site would be cleared and the resulting soil disturbance of construction and maintenance of the project would constitute a visual disruption in the otherwise natural-appearing landscape. Consequently, the primarily natural appearance of the site would be altered and the Project would reduce the overall visual intactness to a low level (1.2).

Unity (1.4)

The Project features would add tall, rectangular forms, and varying textures from smooth, hard edges to serrated edges as the trackers move with the sun path. Colors associated with the trackers would vary from greys to bright spectral color produced from sunlight passing through the solar array panels. These features contrast with the natural landform and the texture, color and short stature of existing vegetation. This contrast would be evident from one side of the road to the other. Project components would be highly noticeable and would dominate the view from Key View 3. With the removal of existing natural features, the addition of trackers and other project components would result in a contrasting visual pattern (little unity would result between Project components and the form, line, color, and texture of natural elements in the landscape). Therefore, the level of industrial project components associated with the Project and visible from Key View 3 would significantly reduce the unity of the landscape.

Viewer Response (5.0)

Motorists (primarily residents) are the most likely viewers of the Project from Key View 3 and would be continually exposed to views of the project site when traveling along this section of

Tierra del Sol. View durations will be relative long for viewers regardless of travel speed. Patterns caused by tracker rows and higher speed movement will result in noticeable motion patterns and tracker elements will tower over motorists on Tierra del Sol Road. Therefore, given viewing duration and orientation of the Project in relation to this Tierra del Sol Road, viewer awareness of the Project from Key View 1 is likely to be moderately high.

Resulting Visual Quality

The addition of trackers and ancillary equipment would increase the scope of industrial elements already present at lower density in the landscape and would further alter the overall character of the ridge and valley LCU as viewed from Key View 3. Given this increase and viewer proximity to the Project, project components would result in a high visual impact at Key View 3.

Key View #4 – Existing Conditions

Orientation

KOP 4 provides a representative view of southbound motorists on Tierra del Sol Road The key view is at an approximate elevation of 3,650 feet in the background view area at the horizon line. The project site is 5–90 feet above Key View 4 with relatively level ground between these two locations. The northern boundary of the site is located approximately 0.68 mile away.

Visual Character/Quality

Key View 4 consists of a wide, relatively expansive view of the distant project site and the surrounding Tierra del Sol community (Figure 12). The south-facing view looks into the sunlight and renders the project in a backlit condition. Backlit conditions tend to reduce landscape detail that is discernible to the human eye. The rolling form of Tierra del Sol Road is visible in the immediate foreground and proceeds towards the project site and distant mountainous terrain located beyond the project site in Mexico. Vegetation in the immediate foreground is clumped and of moderate height with relatively flat openings of fine textured short grasses on which a modest, tan-colored residential structure is located. Beyond the structure, scrub oak woodland dots the landscape and the dark green color and rough texture of trees and shrubs is relatively consistent to the project site when viewed at this low angle. The tall, angular forms of 500-kV SWPL transmission lines, telephone poles, and the distant clumping of pine trees on the horizon line contribute vertical interest to the skyline but do not upset the dominant horizontal line of the landscape at the horizon line. The gently undulating landform that is characteristic of the ridge and valley LCU is evident in this Key View, a gently rolling, chaparral-covered landform with occasional vertical man-made elements.

Key View 4 - Existing Conditions

Key View 4 - Proposed Conditions, Visual Simulation

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FIGURE 12

Key View 4 - Visual Simulation

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Vividness (3.6)

The presence of high-voltage transmission structures, small clusters of pine trees, and (in the southeast extent of the view) distant mountainous terrain on the horizon line create visual interest in this view. The rolling landform form slowly rises in elevation towards the project site and eventually gives way to the prominent form of clumps of pines trees that then transition to taller, larger scale man-made elements (transmission structures) that ultimately disappear against the backdrop of mountainous terrain to the south. The contrasting natural and man-made forms and the presence of a distant silhouetted mountain range create a moderately vivid landscape (3.6).

Intactness (Rated 2.4)

As viewed from Key View 4, the intactness of the landscape has been clearly disturbed by the introduction of encroaching man-made elements. Tierra del Sol Road proceeds from the viewing location towards the horizon and creates a break in the continuity of natural chaparral vegetation. The density of chaparral vegetation in the landscape is variable due to past land use and residential development, which produces an inconsistent visual pattern. In the foreground transmission structures rise out of clustered shrubs of moderate height, creating prominent silhouetted forms and the presence of 500 kV SWPL transmission line introduce contrasting vertical elements in an otherwise horizontal (in terms of the form and lines of chaparral vegetation) landscape. The visible man-made structures are encroaching elements in the landscape and effectively reduce the intactness of the view which is considered moderately low (2.4).

Unity (Rated 2.2)

Key View 4 contains a series of contrasting visual patterns: the linear, slightly rolling form of Tierra del Sol Road and adjacent vegetation, the flat form of cleared land and vertical form of residential structures, the stark and linear form of wooden distribution line poles and the tall, prominent form of 500 kV SWPL transmission lines, as well as the gently rising silhouette of the distant mountain range in Mexico. Colors are a relatively muted selection of dull greys, greens and tans and the transition between textures is often abrupt. The composition is weakly unified because of contrasting visual elements and unity is considered to be moderately low (2.2).

Proposed Project Features

Proposed trackers and the gen-tie line would be visible in the middleground from this Key View. Existing vegetation on the project site would be removed and regular rows of trackers would align perpendicular to the horizon line. These rows would be evident from this vantage

point around mid-day. Transmission structures associated with the Project's gen-tie line would noticeable as their tall, vertical form would be silhouetted against the background blue sky.

Changes to Visual Character and Quality

As shown in Figure 12, the Project would add trackers and a highly visible gen-tie line to the project site. While existing cultural modifications are visible in the Key View 4 landscape (i.e., the distribution line structure in the immediate foreground and more distant transmission structures located in the middleground), development of the project site would entail the removal of on-site chaparral vegetation and trees and addition of vertical project components that would alter the existing visible landscape, primarily, the southern horizon. As viewed from Key View 4, the Project would replace a distant, dark, horizontal line of chaparral vegetation, the vertical form of pine tree clumps, and the nearly horizontal line associated with existing topography with a different color, texture and altered character of the horizon line. While the addition of trackers and the gen-tie line would increase the level of industrialization and further alter the character of the view available from Key View 4, distance would weaken the visible contrast between existing and proposed on-site features.

Vividness (3.0)

Although the view is panoramic and consists of a wide expanse of vegetation and topography that is characteristic of the ridge and valley LCU, the vividness of the view will be reduced with the introduction of project components. The silhouette of a distant mountain range to the south in Mexico contributes an element of interest to the landscape however; the foreground, middleground, and intervening land between Key View 4 and the project site are the focal points of this view. While the addition of project components would complement the existing, highly visible SWPL structures located on the project site, trackers and the proposed gen-tie line would highly contrast with the natural appearance of existing landscape. Foreground view would remain unchanged, however, the visibility of project components may decrease the prominence of existing natural vegetation and result in an overall increase in industrialization of the view. The introduction of the contrasting texture and color of project elements would reduce the vividness of this view to a moderate level (3.0).

Intactness (1.8)

While the Project would add tall, vertical industrial elements to the existing visual pattern influenced by the low form of vegetation and the relatively horizontal line associated with the horizon, visual encroachment attributed to project components would be relatively weak due to distance between the project site and Key View 4. Still, the addition of substantial human-made

elements to the background view would increase the level of industrialization of the visual landscape and would degrade the intactness of the existing view.

Unity (1.7)

Although distant trackers would be silhouetted on the horizon line, the addition of a relatively bright, horizontal smooth to serrated line associated with tracker rows would contrast with the horizontal line associated with existing on-site chaparral vegetation. Distance and backlighting decreases the detail of project components and the addition of a continuous line of project elements would essentially raise and alter the existing horizon line. Because the detail of project components would be weak due to distance, the Project's impact on the unity of the existing site would be noticeable, but not dominating at this distance. Project components would not dominate the view and intervening vegetation and topography would obscure views of the cleared site beneath the trackers.

Viewer Response (5.0)

Motorists (primarily residents) are the most likely viewers of the Project from Key View 4. Travel speeds are in the range of 35 mph. View duration will be moderate with views focused by the southern orientation of Tierra del Sol Road, which is perpendicular to the project. Therefore, motorist viewer awareness is likely to be moderately high.

Resulting Visual Quality

The installation of trackers and the gen-tie line to the distant horizon line visible from Key View 4 would further industrialize the project site and would add contrasting elements to a primarily natural-appearing landscape. However, the prominence of project components would be reduced by the view distance and screening elements such as existing vegetation and topography. Therefore, the Project would result in a moderate visual impact at Key View 4.

Key View #5 – Existing Conditions

Orientation

KOP 5 provides a representative view of residents located near the western terminus of Tierra Estrella. The key view location is on County lands located adjacent to the Campo Indian reservation. The key view is east-southeast facing at an approximate elevation of 3,580 feet. The project site rises 70 –165 feet above the key view location and an intervening valley is present in the middleground view. The western boundary of the site is located approximately 1 mile away.

Visual Character/ Quality

The view of Key View 5 is characterized as primarily natural and characteristic of the ridge and valley LCU. The presence of man-made elements (rural residential development, access roads, and transmission infrastructure) slightly degrade the overall visual quality of this wide, expansive view. The visual pattern of knee-high shrubs in the foreground is broken by the wide, sand-colored linear form of the San Diego and Arizona Eastern Railway right-of-way Beyond the right-of-way, vegetation is tall and relatively constant into the valley and the far slopes leading up to the project site. Vegetation colors are a mix of olive green and dark green. Residential development is sporadically visible throughout the landscape, interspersed with relatively dense cover of chaparral vegetation. Many structures are partially or wholly blocked by the tall vegetation. The topography of the area slopes downward into a shallow valley before climbing toward the project site which is demarcated by the presence of a clustering of pine trees at the top of the ridge. The tall forms of the 500-kV SWPL transmission lattice towers are partially and wholly visible, depending upon the position in the landscape and intervening topography. Four high-voltage transmission structures decrease in visibility as the elevation decreases to the west. Lastly, the rugged terrain of a distant mountain range in Mexico contributes a relatively noticeable feature on the skyline. Overall, the horizon line is an unbroken undulating, horizontal line punctuated by occasional trees and transmission towers.

Vividness (3.9)

The view is expansive and contains a hint of a distant yet distinct mountain silhouette. The dominant features from this key view are the gently undulating horizon line and sky. The interplay of rural residences and vegetation in the middleground provides a subtle variation of elements and colors that provides moderate visual interest. The occurrence of trees and the large-scale of transmission structures introduces contrasting vertical forms however, the view is relatively indistinct and its vividness rating is moderately high (3.9).

Intactness (4.8)

With the exception of the foreground access road and 500 kV SWPL transmission structures which are partially silhouetted against the light blue sky on the horizon or blending with the background landscape encroaching elements in this view are limited. The general lack of encroaching elements produces a visual pattern that is relatively intact, emphasizing the landscape forms and relationship with the sky resulting in a visual order that is strong. Therefore, the intactness of the view is considered moderately high (4.8).

Unity (4.5)

With the exception of the access road in the immediate foreground, the view is relatively unified. Residential development in the project area is modest and tends to blend in with the surrounding chaparral vegetation. Due to the view distance, rolling topography and blending with the landscape, the relative scale and visual prominence of the transmission structures is reduced in the overall ridge and valley LCU. Landforms then are relatively rolling and low profile; colors are muted. The gradation of color from light to dark is exemplified by the light color of the foreground and middleground vegetation and the dark purple color of the distant mountain range. Unity is therefore considered moderately high (4.5).

Proposed Project Features

Proposed trackers would be the primary project components visible from Key View 5 (see Figure 13). Due to the landscape-level view afforded at this location, project effects resulting from vegetation removal would be visible however, more distant project components including the gen-tie line, collector substation, and O&M annex building would be obscured by the topography of the site. Similar to Key Views 1 and 2, trackers located at the western boundary of the project site would be visible from Key View 5 and views of these features would extend in a north to south orientation toward the U.S./Mexico international border.

Changes to Visual Character and Quality

As shown in Figure 13, trackers would be visible in a generally southeasterly direction and would be oriented in a linear row orientation. The light color of the trackers will contrast with the various values of green and textures of existing vegetation in the surrounding landscape. The horizon line will be visibly elevated and present a contrasting horizon line character that is at times a hard smooth line or serrated edge depending on the time of day and orientation of the trackers relative to this angle of view. The addition of trackers would increase the level of industrial elements on the project site (and in the landscape) and would further alter the overall character of the view. While the view is panoramic, the addition of prominent trackers on the horizon line would create highly visible man-made elements of focus in the landscape.

Vividness (3.2)

Within the expansive view offered at Key View 5, trackers would be noticeable as their boxy, rectangular form and straight lines would contrast with the form and ragged lines associated with existing vegetation. The texture and color of trackers (smooth and bright) would also contrast with the textures and varying values of green-tinged vegetation. These contrasting components would combine to create a scene of generally low vividness. While unique, the view of a

relatively continuous expanse of natural vegetation would be broken by the addition of visible industrial elements on the distant horizon which would affect the vividness of the view.

Intactness (3.2)

The Project would remove existing natural elements (vegetation and prominent ridge top trees) from the landscape and install trackers. From Key View 5, industrial trackers would visually encroach on the primarily natural-appearance of the landscape and would reduce the intactness of the existing view. The removal of on-site trees within the western boundary of the Project site would alter the existing horizon line and replacement of these natural features with man-made features of contrasting color, texture, and form. The project would introduce an industrial feature to an otherwise rural setting that would essentially alter the character of the area. Distance would however reduce the prominence of visible project components and project details would tend to blend with one another (creating an indistinct visual pattern) and therefore, project impacts on existing intactness of the view would be moderate.

Unity (2.9)

The inclusion of the Project within a primarily natural setting would upset the existing unity of the view. The flowing horizon line and distinct silhouette of on-site pine trees would be altered by the Project; the boxy, rectangular form of panels would evident against the backdrop of the blue desert sky and the removal of trees would reduce the level of variety of form and line in the landscape. The removal of trees and replacement with the repeating rows of trackers would create a visual pattern in which man-made features would contrast with natural features. Project effects to the unity of the landscape would be noticeable.

Viewer Response (2.0)

Residents and occasional motorists are the most likely viewers of the Project from Key View 5. While residents are considered highly sensitive to visual change, motorists are generally understood to have a lower sensitivity to visual change in the environment because their attention is focused on the road as opposed to the landscape through which they are passing. The view from Key View 5 is oriented to the southeast and because the location is along a north-south dirt access road, the focus of potential viewers would be oriented away from the project site. Travel speeds are low on this unpaved road, but greater attention is demanded of the driver to navigate the varied terrain. Therefore, given viewing duration and viewer orientation, viewer awareness of the Project from Key View 5 is considered moderately low.

Key View 5 - Existing Conditions

Key View 5 - Proposed Conditions, Visual Simulation

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FIGURE 13

Key View 5 - Visual Simulation

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Resulting Visual Quality

The addition of trackers to the horizon visible from Key View 5 would alter the existing character of the area and view. The visual impact would be muted by distance; the prominence of project components would be somewhat subdued. The individual and collective form of trackers would introduce a boxy, rectangular form and pattern to the skyline that would rise from the existing (and horizontal) horizon. Therefore, it is anticipated that implementation of the Project would result in a **moderate visual impact** at Key View 5.

Key View #6 – Existing Conditions

Orientation

Key View 6 provides a representative view of northbound Tierra Del Sol motorists and is located approximately 600 feet north of the proposed solar farm site. The orientation of the key view is to the north-northeast towards the proposed overhead gen-tie line alignment and is located at an approximate elevation of 3,600 feet. From this location, a relatively narrow valley populated with clusters of oak trees as well as sparsely developed chaparral-covered lands are located between the viewer and the proposed gen-tie alignment.

Visual Character/Quality

Vividness (3.5)

Slight visual contrast between natural and man-made components is evident from Key View 6 but the landscape displays a consistent rural scale and character and the resulting view is altogether coherent and harmonious (see Figure 14). Particularly prominent and/or vivid natural forms and lines that would suggest a striking or distinct visual pattern in the landscape are generally absent. For example, the rolling form and line of the chaparral and boulder covered ridgelines in the middleground viewing distance are definite but lack significant high terrain or other striking features (i.e., promontories) that are particularly eye-catching or bold. Further, the form and line created by Ratttlesnake Mountain adds contrasting elements to the horizon but at this distance and viewing angle, the ridgeline is not overly striking or memorable. Also, at this distance, the form and line of Rattlesnake Mountain resembles that of other ridgelines in the area and, as a result, is less visually distinct. Therefore, the vividness of the Key View 6 landscape is considered moderate (3.5).

Intactness (4.1)

The Key View 6 landscape is generally void of features that could be described as eyesores. Regarding man-made development, rough textured wood poles supporting local electrical and communication infrastructure are tall and portions of poles are skylined however, these features are not overly prominent and unlike regional electrical infrastructure that traverses the solar farm site they display a rural character and a consistent bulk and scale with that of the surrounding landscape. In addition, vertical man-made elements are primarily located and limited to the Tierra Del Sol Road corridor which leaves the valley and ridge landscape and distant ridgeline largely intact. Also, while the terra cotta color of short fence posts delineating private property is darker and contrasts slightly with the light color of exposed soils on the foreground property located east of Tierra Del Sol Road, the fencing material is appropriate in the context of the surrounding area. Therefore, because of a general lack of visually encroaching features in the Key View 6 landscape, intactness is rated as moderately high (4.1).

Unity (3.8)

The juxtaposition of the valley landscape characterized by agricultural uses, low-density rural residential development, and oak tree clusters and the chaparral and boulder covered ridge landscape forms an otherwise coherent and harmonious rural pattern. In addition, local electrical and communication infrastructure and fencing installed adjacent to Tierra Del Sol Road display a particularly rural character as these features are constructed at a rural scale and further contextualize the character of the project area. From Key View 6, the tan color of exposed soils in the foreground contrast slightly with the green hues of background vegetation however, cleared lands for agricultural and ranching uses are commonplace in the project area. In addition, the soils comprise a relatively small land area of the landscape and the green color and rough form of oak tree and chaparral vegetation is generally consistent and definite. Lastly, the view of the northeastern horizon line is free of conflicting elements and vertical man-made development is concentrated along Tierra Del Sol Road. The concentration of electrical and communication infrastructure along the roadway minimizes the contrast between natural and man-made elements and contributes to the visual unity displayed in the landscape. As such, unity is rated as moderately high (3.8).

Key View 6 - Existing Conditions

Key View 6 - Proposed Conditions, Visual Simulation

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Proposed Project Features

From Key View 6, several proposed gen-tie structures would be visible to the north-northeast and the vertical form, regular line, and dull grey color of structures would be apparent to passing motorists. More specifically, the middle ground landscape between the northern visual limits of Tierra Del Sol Road and Rattlesnake Mountain would be dotted with 10 tubular steel structures. The visibility and visual prominence of structures would be a factor of the distance between Key View 6 and individual pole locations. For example, the transition pole would be located closest to Key View 6 and would display greater visual prominence than more distant gen-tie structures. Further, as shown in Figure 14, a portion of the tall, vertical profile of all gen-tie poles would rise above the distant horizon and create dark silhouettes of these features against the expansive background blue sky. From Key View 6, the nearest gen-tie structure, a 100-foot tall transition pole located east of Tierra Del Sol Road and north of the San Diego and Arizona Eastern railroad, would be located approximately 0.5 mile away. In addition to the prominent form and vertical line of the transition pole, horizontal crossarms and sagging, concave lines associated with the three-circuit 138 kV transmission line would be visible from Tierra Del Sol Road.

Changes to Visual Character and Quality

Vividness (2.6)

Visual contrast in regards to disparate forms, lines, and colors would result from the introduction of the gen-tie structures to the Key View 6 landscape. More specifically, the tall, narrow form, vertical line, and grayish color of gen-tie structures would contrast with the characteristic pattern elements such as the rough form of foreground vegetation, the rugged and flowing line of terrain, and the green and brown hues of vegetation and soils in the existing landscape. While the texture of distant gen-tie structures would be difficult to discern and the form and line would slightly resemble that of local electrical infrastructure in the immediate foreground viewing distance, color contrast would be evident and the regular occurrence of grayish colored steel poles piercing the sky would upset the existing horizon line. It should also be noted that as viewed from Key View 6, gen-tie structures would be front lit which would increase the resulting color contrast and visibility of features. In addition, proposed gen-tie structure would be constructed of steel and would display a different visual character than that of wooden support poles located adjacent to Tierra Del Sol Road. While the existing view is not considered overly striking or memorable, the introduction of multiple gen-tie structures and crisscrossing and sagging transmission lines would contribute contrasting forms and lines to the area that would detract from the overall vividness of the view.

Intactness (2.4)

The tall, narrow form and grayish color of skylined gen-tie structures across the primarily natural landscape would undermine the integrity of the existing visual pattern. With the exception of local electrical and communication infrastructure adjacent to Tierra Del Sol Road, the landscape is void of obvious encroaching features and the installation of gen-tie structures within a broad valley lacking any visually prominent man-made features would be highly noticeable and produce strong visual contrast. Further, the form, line and color of gen-tie structures would conflict with that of shorter wooden support poles installed adjacent to Tierra Del Sol Road and in addition, the transition pole would include multiple cross arms not currently displayed by existing infrastructure. In addition, the placement of gen-tie structures through the valley would be exhibit a "leap-frog" organization as opposed to a straight linear arrangement such as that displayed by existing support poles alongside Tierra Del Sol Road. The jumbled arrangement of gen-tie structures and multiple crisscrossing transmission lines produces slight visual chaos and does not resemble the lines displayed by existing infrastructure in the landscape. Also, gen-tie structures would be silhouetted and would encroach upon the existing view of a gently rolling horizon line and an expansive sky. While the distance between Key View 6 and project components would decrease the apparent size and visual prominence of distant gen-tie structures, the bulk and scale of the transition pole would remain prominent and the skylined effect of structures would remain apparent to passing motorists and local residents. Therefore, the introduction of the gen-tie line would affect the existing intactness of the Key View 6 landscape.

Unity (2.5)

As noted above, distance between the key view location and project components would reduce the apparent size and visual prominence of distant gen-tie structures however, the tall vertical form and horizontal lines of the transition pole would be apparent and this feature would become a focal point in the landscape. In addition, while more distant gen-tie poles display a relatively consistent height and width, the transition structure appears abruptly in the landscape and displays short, horizontal, and metallic crossarms not currently exhibited in the surrounding area. Also, as seen in Figure 14, the portion of gen-tie structures located below the horizon line created would be difficult to discern however, the dullish gray color of tubular steel poles would produce relatively bold silhouettes when viewed against the backdrop of the expansive blue sky. In addition, the introduction of narrow, vertical, and skylined elements within a natural and seemingly unaltered broad valley would affect the existing harmonious composition of the landscape expressed as a combination of rolling lines, rough textures, colors of various green and brown hues, and rounded and flattened forms of vegetation. Moreover, vertical man-made development within the landscape is primarily confined to the Tierra Del Sol Road corridor and implementation of the gen-tie line would upset the existing visual pattern by expanding the

presence of man-made development to undeveloped, natural areas. As such, the introduction of the gen-tie line would affect the existing unity of the Key View 6 landscape.

Viewer Response

Local area motorists and residents of Tierra Del Sol are the most likely viewer groups to experience the visual change resulting from implementation of the proposed project as depicted in Figure 14. Along the northbound travel lane of Tierra Del Sol Road and assuming a travel speed of 35 miles per hour, views of the gen-tie line would be available for approximately 28 seconds. More specifically, views would be available from the northern turn adjacent to the solar farm site to the segment of the roadway located adjacent to clumps of existing oaks (see Figure 14 – the tall, mounded form of oak trees would help to screen gen-tie structures from the view of northbound motorists). In addition, views of gen-tie structures would be available for approximately 26 seconds to southbound Tierra Del Sol Road motorists from approximately 950 feet north of the railroad crossing to approximately 400 feet south of the crossing. As previously stated, the sensitivity and expectations of residential viewers is considered high due to both the long-term duration of views afforded to permanent residents and an assumed familiarity of the surrounding landscape and visual resources. Along the northbound travel lane of Tierra Del Sol Road, the availability of a broad, open view towards Rattlesnake Mountain would attract the eye of passing motorists and the visual effect of gen-tie structures would be noticeable. In addition, Tierra Del Sol Road is assumed to be used primarily by residents of the local community and this viewer group would be familiar with existing landscape and would be sensitivity to changes. Despite the short duration of the view, motorists/residents may be exposed to the view multiple times throughout the day as they travel in and around the local community. As such, viewer response at Key View 6 is anticipated to be high.

Resulting Visual Quality

The visual impact associated with the gen-tie line as viewed from Key View 6 would be strong. The introduction of the tall, vertical forms, regular lines, and dullish gray color of gen-tie structures to the composite valley and ridgeline landscape would produce noticeable visual contrast. While the apparent size/scale of distant gen-tie structure would be diminished by distance, the skylined effect of structures would remain apparent to passing motorists and local residents and the bulk and scale of the transition pole would remain prominent in the landscape. Moreover, the tall, bold form of the transition structure would appear abruptly in the landscape and would display short, horizontal, and metallic cross arms not currently exhibited in the surrounding area by existing infrastructure. The disparity between the rural character of existing vertical infrastructure and the metallic, industrial character of proposed gen-tie structures would be evident. In addition, the placement of gen-tie structures through the valley

would be exhibit a zig-zag organization as opposed to a straight linear arrangement such as that displayed by existing support poles alongside Tierra Del Sol Road. The jumbled arrangement of gen-tie structures and multiple crisscrossing transmission lines would produce slight visual chaos and would not resemble the lines displayed by existing infrastructure in the landscape. Lastly, the skylined portion of gen-tie structures would interrupt the existing open, broad and natural composition of the view and the existing vividness, intactness and unity of the visible landscape would be affected.

Key View #7 – Existing Conditions

Orientation

Key View 7 provides a representative view afforded to northbound motorists on Tierra Del Sol Road. The orientation of the key view is to the north-northeast towards the proposed overhead gen-tie line alignment and is located at an approximate elevation of 3,655 feet. From this location, the San Diego and Arizona Eastern Railroad crossing occurs in the immediate foreground distance and crossing signs and local communication infrastructure is visible along Tierra Del Sol Road. South of the railroad, the land slopes downward and is populated by a variable coverage of chaparral vegetation. North of the railroad, a small cleared area of short grass is surrounded by chaparral vegetation and gently rising terrain. The extent of the view is rather limited to the north and the northeast by a low horizon line created by vegetation, a lightly colored boulder covered hill in the central portion of the view, and the distant mounded form of Rattlesnake Mountain.

Visual Character/ Quality

Vividness (3.2)

From Key View 7, the vertical form and straight line of local communication infrastructure, crossing signage, and to a lesser extent, distant electrical infrastructure, creates slight visual contrast when viewed against the characteristic pattern elements of vegetation and terrain in the surrounding landscape. These features however, are located alongside Tierra Del Sol Road for the most part and visible manmade development is largely limited to the roadway corridor. The weakly defined horizon line is not bold or striking and the slightly mounded and spreading form of vegetation lacks distinctness and particularly interesting visual patterns. The distant mounded form of Rattlesnake Mountain does provide some visual interest in the landscape however, as viewed from Key View 7, the apparent size of the mountain is reduced and the feature is not visually prominent. As a result, the vividness of the view is assessed as moderate (3.2).

Intactness (3.6)

While rough textured wooden support poles and railroad crossing signs installed adjacent to Tierra Del Sol Road display a rural scale and character that is consistent with the character of the surrounding area, a portion of the infrastructure poles extend beyond the weakly defined horizon line and essentially enframe the northeastern view. However, despite the silhouettes created by skylined portions of local communication infrastructure, the Key View 7 landscape is generally absent of conflicting encroaching elements that could be considered eyesores. In addition, much of the natural landscape visible from the Key View 7 is intact as man-made development is primarily limited to the Tierra Del Sol Road corridor and the horizontal line displayed by the San Diego and Arizona Eastern railroad. Therefore, due to a general lack of encroaching features in the Key View 7 landscape, intactness is rated as moderate (3.6).

Unity (3.8)

Although the vertical form of local communication infrastructure pierces the horizon and portions of these features are silhouetted against the background sky, the rough texture and brown hue of support poles are relatively harmonious with the rough textures and dark green colors of surrounding chaparral vegetation. In addition, the rural scale and character of infrastructure support poles reduces the visual prominence of these features and helps create an overall coherent visual pattern that is void of conflicting and encroaching elements and eyesores. Altogether, the presence of local infrastructure, two-lane roads and short, unobtrusive residential fencing along Jewel Valley Road is appropriate and compliments the rural character of the larger Boulevard area. As such, unity is considered moderately high (3.8).

Proposed Project Features

As viewed from Key View 7, proposed gen-tie structures would be located to the east and northeast, generally between the the wooden support pole located south of the railroad and the boulder covered hill in the center of the view (see Figure 15). From the tall, multi-armed transition structure, gen-tie structures would proceed in a northerly direction towards the central hill and would then turn east and disappear behind existing topography. The nearest gen-tie pole, a 100-foot tall transition pole located east of Tierra Del Sol Road, would be located in the foreground viewing distance approximately 0.3 miles east of Key View 7. While the base of visible gen-tie structures would be screened by vegetation and terrain, a portion of the structures would be skylined. As shown in Figure 15, three gen-tie support structures, the horizontal line created by crossarms on the transition pole, and multiple sagging, slightly concave transmission lines between gen-tie structures would be visible from Key View 7.

Changes to Visual Character and Quality

Vividness (2.5)

With implementation of the proposed project, the tall, smooth form and straight, vertical line of gen-tie structures would be added to the Key View 7 visual landscape. While the form and line of the proposed gen-tie structures would partially resemble the tall form and vertical line of existing infrastructure located adjacent to Tierra Del Sol Road, the dull, grayish color and smooth, manufactured texture of gen-tie structures would be apparent and the disparity in materiality would be visible. Further, gen-tie structures would be front lit as viewed from the northbound travel lanes of Tierra Del Sol Road and this would increase the anticipated color contrast between proposed features and existing wooden support structures. In addition, the transition structure would display multiple, straight horizontal lines associated with crossarms and several long, sagging lines associated with the 138 kV transmission line (see Figure 15). In essence, the gen-tie structures would introduce lines that contrast and display a distinct visual character separate from that of existing communication infrastructure which lack crossarms and support two relatively straight lines along the Tierra Del Sol Road corridor. Also, as motorists arrive at the key view location, the screening effect of oak trees installed adjacent to Tierra Del Sol Road vanishes and the landscape becomes relatively broad. As motorist scan the landscape, the eye tends to follow the horizontal line displayed by the San Diego and Arizona Eastern railroad and adjacent lightly colored soil stripes. From here, the largely horizontal composition of the landscape would be altered by the abrupt verticality of the transition structure and the eye would then follow the northerly progression of the gen-tie alignment. While the introduction of gen-tie structures to the Key View 7 landscape would not obstruct or screen background elements that contribute to the overall memorability or vividness of the view, the addition of disparate lines, colors and textures to the landscape would affect the existing visual patterns. As such, resulting vividness is considered moderate (2.5).

Key View 7 - Existing Conditions

Key View 7 - Proposed Conditions, Visual Simulation

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Intactness (2.3)

As viewed from Key View 7, gen-tie structures would display tall forms and lines that contrast with the horizontal, slightly rolling horizon line and the rough form of chaparral vegetation. In addition, the bulk of the transition structure including crossarms and insulators would produce a relatively bold and visually prominent feature in the landscape. In addition, the industrial character of the transition pole may be considered an eyesore by passing motorist as they would be provided relatively unobstructed views of the tall feature at the key view location. Also, as shown in Figure 15, man-made development is primarily located adjacent to Tierra Del Sol Road and implementation of the gen-tie line would entail the expansion of man-made development and alteration of the existing visual pattern to include the proposed gen-tie alignment east of Jewel Valley Road. Further, the multiple horizontal crossarms of the transition structure would not resemble the form and line of existing communication infrastructure and the dull, grayish color and smooth textures of gen-tie structures would appear dissimilar from existing wooden and rough support poles in the landscape. The introduction of the gen-tie along the proposed alignment would upset the existing visual pattern and occurrence of man-made development adjacent to Tierra Del Sol Road and would begin to create a slightly jumble visual environment. As such, the resulting intactness of the Key View 7 landscape is considered moderately low (2.3).

Unity (2.7).

The tall, vertical form of skylined gen-tie structures and multiple concave lines associated with the 138 kV transmission line contrasts visually with the rugged form of chaparral vegetation and the soft line displayed by the distant horizon. While more distant structures would display a relatively short form as the apparent size of these features would be reduced with increasing distance from Key View 7, the transition pole would remain a conflicting vertical visual element lacking resemblance to exiting vertical elements in the landscape. In addition, the introduction of the gen-tie line along the proposed alignment would deviate from the existing visual pattern of siting man-made development adjacent to Tierra Del Sol Road and constructing infrastructure at a rural scale and character. Further, the metallic color and texture of gen-tie structures would not reference the rural character of the surrounding area and given the bulk and scale of the transition structure as depicted in Figure 15, little visual unity between this feature and the natural pattern elements of vegetation and terrain would exist. Therefore, the resulting unity of the Key View 7 landscape is assessed as moderate (2.7).

Viewer Response

Local area motorists travelling along Tierra Del Sol Road and residents in the Tierra Del Sol area are the viewer groups most likely to experience the visual change resulting from implementation

of the proposed project as depicted in Figure 15. From the northbound travel lane of Tierra Del Sol Road, the particular view of the proposed gen-tie line depicted in Figure 15 would be available for approximately 17 seconds from approximately Moon Valley Road to the abrupt left turn roadway that takes motorists into the low, oak populated valley of the Tierra Del Sol community. The visual experience of the gen-tie line for southbound motorists would largely be similar to that described above for Key View 6. The sensitivity and expectations of viewer groups are considered high due to an assumed familiarity with the surrounding landscape and visual resources and the long-term duration of views afforded to permanent residents in the area. Although the view would be briefly available, local motorists may be exposed to the view multiple times throughout the day as they travel through the area. As such, viewer response at Key View 7 is anticipated to be high.

Resulting Visual Quality

The visual impact associated with the gen-tie line as viewed from Key View 7 would be strong. Implementation of the proposed project would entail the introduction of tall, vertical forms, regular lines, and dullish gray colors to the valley and ridgeline landscape captured in Key View 7. In addition, the bulk, scale, color and complexity of the transition pole would produce a bold and prominent form that would be visually dominant in the landscape. Further, the materiality and color of gen-tie structures would appear dissimilar from that of existing wooden support poles installed adjacent to Tierra Del Sol Road and this contrast would be heightened during daytime hours as structures would be front lit and would produce a glaring visual effect. While the tall form and vertical line of gen-tie structures would somewhat resemble the tall form and vertical line of existing support poles, gen-tie structures would display a metallic and industrial character that would contrast with the rural scale and character of rugged wood poles. Also, the metallic horizontal crossarms of the transition structure and the multiple sagging line of the 138 kV transmission line would not compliment or resemble the form and line of existing infrastructure in the landscape.

Key View #8 – Existing Conditions

Orientation

Key View 8 provides a representative view afforded to northbound motorists on Jewel Valley Road. The orientation of the key view is to the north-northwest towards the proposed overhead gen-tie line alignment and the key view location is located at an approximate elevation of 3,570 feet. From this location, the distant northwest horizon line is partially obscured by a grove of oak trees located in the foreground viewing distance within Jewel Valley. The characteristic short form of grasses associated with the valley landscape comprises much of the foreground view and

short fence posts and stripes of lightly colored soil flank the Jewel Valley Road alignment. An existing metallic structure supporting local electrical infrastructure is located in the central portion of the view and a second structure located to the north is effectively backscreened by a large oak tree. The visible portions of the distant ridgeline consist of chaparral vegetation and lightly colored boulders.

Visual Character/ Quality

Vividness (3.7)

From Key View 8, the vertical form and straight line of the lone support pole produces slight visible contrast when view in the context of the surrounding valley landscape, and in particular, the forms and lines displayed by oak trees and the distant ridgeline. While the western horizon is somewhat obscured by the tall, upright form of oak trees, a major component of the existing view is the sky which is relatively wide and expansive. A portion of an existing tall support pole and to a lesser extent, the crowns of several large oak trees, pierce the horizon and are skylined (see Figure 16). However, despite the silhouette created by tall support structure against the backdrop of the expansive sky, manmade development is relatively limited and the juxtaposition of short grasses and the tall oak trees creates a relatively distinct visual pattern. In addition, with the exception of the lone support structure, which, unlike the wooden support poles located east of Jewel Valley Road, displays a metallic and industrial character, the Key View 8 landscape contains very few visual elements that contrast with the rural character of the surrounding area. As such, the vividness of Key View 8 is considered moderate (3.7).

Intactness (3.6)

With the exception of the centrally located metallic pole supporting local electrical infrastructure, visible man-made development in the Key View 8 landscape displays a rural scale and character that does not encroach on or diminish the existing landscape setting. While the tall, narrow form of the support pole is not necessarily an eyesore, it does seem slightly out of place within the context of the surrounding setting and in general absence of other visible man-made development west of Jewel Valley Road. Still, intactness is considered moderate (3.6) due to limited presence of conflicting man-made development and the established rural character of the view.

Unity (3.5)

The unity of the Key View 8 landscape is assessed as moderate to moderately high. With the exception of the single metallic support structure located west of Jewel Valley Road, man-made development displays a rural scale and character that is harmonious with the pattern elements of

existing vegetation and terrain. While the placement of the support structure centrally within the valley (as opposed to adjacent to Jewel Valley Road) and in absence of similar compatible features presents a slightly jumbled landscape, the narrow form of the structure as well as its relatively minor effect on available views of the expansive background somewhat diminishes the resulting visual contrast. As such, unity of the view is considered moderate (3.5).

Proposed Project Features

As viewed from Key View 8, the proposed gen-tie line would traverse the western ridgeline from south to north and as a result, several support structures would be partially skylined. Intervening oak trees would screen the base of gen-tie structures and several structures would be backscreened by chaparral vegetation and terrain. In addition, several structures would be fully screened by the crowns of existing oak trees. From Key View 8, gen-tie structures would be located approximately 0.25 miles to the west and northwest. As seen in Figure 16, approximately eight gen-tie support structures at varying levels of visibility may be detectable from Key View 8.

Changes to Visual Character and Quality

Vividness (3.4)

The introduction of the gen-tie line would have a relatively minor effect on the vividness of the existing Key View 8 landscape. As shown on Figure 16, a portion of several gen-tie structures would be skylined however, distance between the key view location and project features would reduce the apparent size and visual prominence of gen-tie structures. In addition, compared to the existing electrical distribution support pole located in the immediate foreground distance, the skylined portions of the gen-tie structures would be relatively short in stature and the resulting silhouette against the background sky would not be overly bold or eye-catching. Further, project components would have little effect on existing views of foreground short grasses and tall oak trees which contribute to the rural character of the Jewel Valley area. It should also be noted that the distant form and line displayed by gen-tie structures on the western ridgeline would be briefly visible to passing motorists. As motorists move through the landscape, dynamic screening of project features resulting from the presence of intervening vertical elements would be available and gen-tie structures would appear, disappear and reappear behind the tall, mounded form of existing oak trees. As such, the vividness of the Key View 8 landscape with incorporation of the gen-tie line is assessed as moderate (3.4).

Key View 8 - Existing Conditions

Key View 8 - Proposed Conditions, Visual Simulation

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Intactness (3.3)

Due to the distance between gen-tie structures and the key view location, the apparent scale of structures would be reduced and these features would have a relatively mild effect on the existing visual character of the Key View 8 landscape. In addition, as shown on Figure 16, several gen-tie structures would be partially backscreened by chaparral vegetation and terrain and others would be screened entirely by the crowns of oak trees. The presence of screening features as well as the presence of an existing support structure in the landscape displaying a metallic and industrial visual character would soften the overall visual impact associated with the gen-tie line. In addition, the horizontal, slightly sagging line of the distant gen-tie line is scarcely visible on the western ridgeline and the multiple horizontal lines of existing electrical infrastructure located in the foreground would attract more attention from passing motorists than the gen-tie line. While several gen-tie structures would be skylined and the dark silhouettes would visually contrast with the bright blue and white color of the characteristic desert sky, skylined would display a narrow form and seemingly short vertical line. As a result, these features would not be overly bold and would not be considered eyesores. Visual encroachment associated with gen-tie structures would be weak and the resulting intactness of the Key View 8 landscape is considered moderate (3.3).

Unity (3.0)

As stated above, the apparent size of gen-tie structures would be reduced due to distance between the key view location and the distant western ridgeline. In addition, the visibility of gen-tie structures would be further reduced due to backscreening by existing vegetation and topography as well as the screening effect associated with intervening vegetation (i.e., oak trees). As a result, the reduced visual prominence of gen-tie structures would assist in the blending of these features into the existing landscape setting such that the visual resources of the landscape would display an overall coherent visual pattern. In addition, the presence of existing vertical elements that pierce the western horizon line diminishes the visual contrast associated with the dark silhouettes created by skylined gen-tie structures. Therefore, effects to the unity of the existing landscape would be minor (3.0).

Viewer Response

Motorists utilizing Jewel Valley Road and residents in the Jewel Valley area would experience the visual change resulting from implementation of the proposed project as depicted in Figure 16. As stated above, views of the project from the northbound travel lane of Jewel Valley Road in the location depicted in Key View 8 would be sporadic and partially obscured by the presence of existing oak trees and the backscreening of project elements by vegetation and terrain. Both

viewer groups are assumed to have a high visual sensitivity to changes in the landscape as they would be familiar with the local visual resources in their surroundings. Despite the fleeting visibility of project components from Jewel Valley Road (gen-tie structures would disappear briefly behind oak trees and then reappear where gaps between trees are available), local motorists/residents may be exposed to the view multiple times throughout the day as they travel to and from work and therefore, viewer response is anticipated to be high.

Resulting Visual Quality

The visual impact associated with the gen-tie line as viewed from Key View 8 would be moderately low. As shown in Figure 16, the visual prominence of gen-tie structures would be reduced due to the distance between the key view location and project components on the western ridgeline. Further, the overall visibility of the gen-tie line would be reduced by the partial backscreening of several structures and the screening effect of intervening oak trees. While the dark, vertical form of several gen-tie poles would be skylined and these features would be apparent in the westward oriented views of passing motorists, the anticipated visual contrast would be diminished by the presence of existing skylined vertical features in the landscape that currently break the continuity of the western horizon line. In addition the presence of tall oak trees that dynamically screen the western ridgeline from the view of passing motorists as well as the siting of proposed gen-tie structures on terrain of varying elevation reduces the visual contrast associated with form and line by avoiding the introduction of regular lines displaying consistent height on the western ridgeline.

Key View #9 – Existing Conditions

Orientation

Key View 9 provides a representative view afforded to southbound motorists on Jewel Valley Road. The orientation of the key view is to the south-southwest towards the proposed overhead gen-tie line alignment and is located at an approximate elevation of 3,600 feet. From this location, the slightly mounded form of Rattlesnake Mountain and nearby higher elevation terrain is visible to the south and the landscape is somewhat enclosed by chaparral and boulder covered ridgelines to the south and west. Oak tree clusters and short grasses comprising the characteristic features of the valley landscape of the project area are visible to the west of Jewel Valley Road with the exception of communication infrastructure located adjacent to the road, visible man-made development is limited. An existing electrical distribution line traverses the valley landscape in the foreground viewing distance however, existing support poles are back screened by vegetation and are not visually prominent.

Visual Character/ Quality

Vividness (4.0)

From Key View 9, the tall form and vertical line of local electrical and communication infrastructure creates slight visual contrast when viewed in the context of the surrounding primarily natural landscape. This contrast is however relatively limited to the Jewel Valley Road corridor and the valley landscape displays a relatively distinct visual pattern of short grasses and the tall, mounded form of oak trees on slightly rolling terrain. Ridgelines to the south and west create a relatively strong horizon line that is interrupted by a limited number of man-made features (a wooden support pole and a segment of an overhead communication line) (see Figure 17). Despite the silhouette created by a single wooden support, electrical and communication infrastructure and other man-made development (fencing, roads, etc.) exhibit a rural scale and character which creates a coherent assemblage of landscape features. In addition, the mounded, slightly pyramidal form of Rattlesnake Mountain and, to a lesser extent, adjacent terrain to the north, creates visual interest in the landscape. As such, the vividness of Key View 9 is considered moderately high (4.0).

Intactness (4.2)

While rough textured wooden support poles installed adjacent to Jewel Valley Road display a rural scale that is consistent with the character of the surrounding area, a portion of a single pole extends beyond the distant southern horizon line and creates a breaks in the otherwise continuous skyline. Despite the resulting silhouette of a support pole juxtaposed against the wide and expansive background sky, the visible landscape is generally absent of encroaching elements that could be considered eyesores. Therefore, because of a general lack of visually encroaching features in the Key View 9 landscape, intactness is moderately high (4.2).

Unity (4.1)

Although the vertical form of local communication infrastructure pierces the horizon and a portion of this feature is silhouetted against the sky, the rough texture and warm light brown hue of support poles are relatively harmonious with the rough textures and dark green colors of surrounding chaparral vegetation. In addition, the rural scale and character of infrastructure support poles reduces the visual prominence of these features and helps create an overall coherent visual pattern that is void of encroaching elements and eyesores. Altogether, the presence of local infrastructure, two-lane roads and short, unobtrusive residential fencing along Jewel Valley Road is appropriate and compliments the rural character of the larger Boulevard area. As such, unity is considered moderately high (4.1).

Proposed Project Features

As viewed from Key View 9, the proposed gen-tie line would traverse the middleground ridgeline north of Rattlesnake Mountain (the tall, mounded terrain to the south) and would proceed in a general northerly direction into the Jewel Valley area. More specifically, from Rattlesnake Mountain, the overhead gen-tie line would proceed northwards towards the expanse of exposed tan soils located southwest of the viewing location and would continue northwards to the western extent of Key View 9 (see Figure 17). The nearest gen-tie pole, a 100-foot tall tubular steel pole located east of Jewel Valley Road, would be located in the foreground viewing distance approximately 0.27 miles from the Key View 9 location. While the base of visible gen-tie structures would not be visible due to intervening vegetation, a portion of several poles would be skylined. As shown in Figure 17, approximately ten gen-tie support structures would be visible from Key View 9. While the visual simulation depicted in Figure 17 include several gen-tie structures traversing the Jewel Valley landscape, an additional gen-tie structure would be located north of the key view location and would be located approximately 365 feet west of the southbound lanes of Jewel Valley Road.

Changes to Visual Character and Quality

Vividness (3.2)

The proposed project would entail the introduction of the the tall, smooth form and straight, vertical line of gen-tie structures to the Jewel Valley landscape. As depicted in Figure 17, the majority of visible structures would be back screened by the dark green to brown color of vegetation and local terrain however, the solid, bulky form, and dull grayish color of structures would result in noticeable visual contrast within the landscape setting. In addition, a portion of visible structures would be skylined and would break the continuous line created by the western horizon. Also, existing electrical and communication infrastructure is present in the landscape along Jewel Valley Road and within the valley however, proposed gen-tie structures would display an inconsistent and slightly conflicting scale and character. Distance would tend to reduce the visual prominence of gen-tie structures however, the resulting contrast in color, scale, form and character would be apparent. Lastly, from Key View 9, the linear alignment of the the gen-tie line would be evident to passing motorists and the presence of dull and gray gen-tie structures in the landscape would attract attention. As a result, the resulting vividness of the key view landscape is assessed as moderate.

Key View 9 - Existing Conditions

Key View 9 - Proposed Conditions, Visual Simulation

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Intactness (3.0)

While gen-tie structures located west of Jewel Valley Road would generally be backscreened by chaparral and boulder covered terrain, a portion of the gen-tie structures would be skylined. In addition and as discussed above, from Key View 9 the gen-tie structures would display a larger bulk and scale than that of existing electrical and communication infrastructure installed in the visible landscape. Because of the contrasting scale, color and texture of the proposed gen-tie structures, these features would encroach upon the existing visual landscape and may be considered eyesores by passing motorists in the area. As such, the intactness of the existing view and visual patterns of the existing landscape would be negatively affected.

Unity (2.9)

As shown in Figure 17, the dull gray color of gen-tie structures would visually contrast with the dark green to brown color of background chaparral vegetation. Further, background vegetation would do little to reduce the visibility of gen-tie structures; rather, the solid form and grayish color would be pronounced when viewed against green and brown hues in the landscape. Also, a portion of the gen-tie structures would be skylined yet the effect would be relatively muted due to the short profile of the skylined segment. While the proposed project would affect the existing unity of the Jewel Valley landscape as viewed from Key View 9, the effect would be somewhat moderated by distance and the surrounding terrain. Further, the details of those structures located closest to Key View 9 (including the most northern gen-tie structure that is not depicted in the Key View 9 visual simulation) would be apparent to viewer groups however, the prominence and visibility of more distant gen-tie structure would be diminished. Still, the proposed project would produce a noticeable conflict regarding man-made and natural pattern elements in the Jewel Valley landscape. Therefore, as viewed from Key View 9, the resulting unity of the landscape is considered moderate (2.9).

Viewer Response

Jewel Valley Road motorists and residents in the immediate area would experience the visual changes depicted from Key View 9. Both groups are assumed to have a high visual sensitivity to changes in the landscape and views of gen-tie structures would be relatively continuously for southbound motorists along this stretch of Jewel Valley Road. As such, viewer response is anticipated to be high.

Resulting Visual Quality

The visual impact associated with the gen-tie line as viewed from Key View 9 would be moderately strong. As shown in Figure 17, the vertical form, line, and color exhibited by gen-tie

structures located closest to Jewel Valley Road would be relatively bold. In addition, the gen-tie structure closest to the road and not depicted in the Key View 9 visual simulations would display a bold, dominant form in the landscape. Further, gen-tie structures would display a scale and character that is inconsistent with that of existing electrical and communication infrastructure located adjacent to Jewel Valley Road and within Jewel Valley. While more distant structures in the landscape would be less visually prominent as their apparent size would decrease with distance from Key View 9, the introduction of large, metallic gen-tie structures would conflict with the rural character of the surrounding setting.

Key View #10 – Existing Conditions

Orientation

Key View 10 provides a representative view afforded to northbound motorists on Jewel Valley Road as the road climbs out of the valley and heads towards Old Highway 80. The orientation of the key view is to the northwest towards the northernmost support structure in the proposed gen-tie alignment linking the on-site collector substation to the rebuilt SDG&E Boulevard Substation. Key View 10 is located at an approximate elevation of 3,600 feet and from this location, brown and short ranch rail fencing runs parallel to the tan soils of the wide Jewel Valley Road right-of-way and undeveloped yet disturbed rising terrain is visible in the foreground viewing distance. Oak trees dotting the valley floor are visible to the west as are chaparral-covered hills featuring occasional rural residential homes. Short grasses are visible on undeveloped ranch lands beyond the fencing and the mounded form and green color of chaparral vegetation can be seen near a small rock outcropping to the northwest. Similar to the ranch rail fencing, tall wooden poles supporting a single black communication line run parallel to Jewel Valley Road and the rectangular form and green color of utility boxes are occasionally visible along the roadway.

Visual Character/Quality

Vividness (3.2)

The majority of the landscape consists of the flat, paved surfaced of Jewel Valley Road and an adjacent band of exposed tan soils that creates the roadway right-of-way. Low, parallel ranch rail fencing and cleared lands contribute to the disturbed, largely horizontal look of the landscape however; the presence of tall oak trees and mounded chaparral vegetation at the valley bottom and screen trees along the roadway to the north adds vertical elements of interest. The low, mounded form and white to tan color of a small rock outcrop partially defines the northwesterly horizon line as does the rising, chaparral-covered east-facing slopes surrounding the Jewel Valley area. Distant homes on east-facing slopes are not visually prominent and tend to recede

into background terrain and surrounding vegetation. Existing infrastructure installed along McCain Valley Road is tall however, the pole is constructed of wood and support a single dark-colored and slightly concave communication line and therefore displays a rural character.

Intactness (3.8)

The landscape is largely free of visually encroaching elements. The occurrence of flat, cleared ranch lands juxtaposed against background chaparral and oak vegetation is common in the rural Jewel Valley area and low ranch rail fencing and wooden support poles along Jewel Valley Road contribute to the rural visual character of the area. Man-made development is rather complimentary to the existing visual character of the area and for the most part displays a low horizontal form that does not conflict with the form and line of natural elements in the landscape. The narrow, vertical form displayed by overhead infrastructure is visible and contrasts with the mounded, spreading form of vegetation however, rural development in the area tends to be concentrated along paved and unpaved roadways and therefore, the occurrence of these features results in low overall contrast. Therefore, because of a general lack of visually encroaching features in the Key View 10 landscape, intactness is moderate (3.8).

Unity (3.6)

The low horizontal form of Jewel Valley Road, the adjacent right-of-way, ranch rail fencing and graded ranch lands creates viewing opportunities to oak and chaparral vegetation along the bottom of Jewel Valley and to chaparral covered hills that are a recurring visual feature in the project area landscape. With the exception of existing infrastructure poles installed along the road, man-made development displays a low form and line that is consistent with the low form and line of the Jewel Valley terrain and is harmonious with the rising terrain and vegetation occurring at the valley edges. The verticality of infrastructure poles deviates from the largely horizontal form of man-made development however, poles have been installed along the graded and disturbed roadway right-of-way and lands adjacent to fencing on the west side of the road in the area has largely been removed for agricultural and/or ranch development. As such, unity is considered moderate (3.6)

Proposed Project Features

From Key View 10 the northernmost gen-tie structure would be located approximately 475 feet to the northwest and the majority of the structure would be skylined (see Figure 18). The gen-tie structure depicted in Figure 18 would be the project feature located closest to motorists on Jewel Valley Road. In addition to the single gen-tie structure (which would display greater mass and height than existing wooden support poles installed along Jewel Valley Road), angular

conductors and multiple electrical lines terminating at the proposed structure would be visible. Between the northernmost gen-tie structure and the rebuilt SDG&E Boulevard Substation the proposed gen-tie line would be constructed underground and therefore, the overhead gen-tie would not traverse Jewel Valley Road overhead. Lastly, in terms of materiality, proposed gen-tie structures would be constructed of steel and would feature a light grey colored finish that would be visual distinct from that of existing wood poles in the immediate area (see Figure 18).

Changes to Visual Character and Quality

Vividness (2.4)

The proposed project would entail the introduction of the the tall, smooth form and straight, vertical line of gen-tie structures to the Jewel Valley landscape and from the inferior angle view afforded to motorists at Key View 10 the northernmost gen-tie structure would be skylined (see Figure 18). In addition, the mass and scale of the proposed gen-tie structures would be noticeably greater than that of existing wood support poles and would therefore produce visual contrast in the landscape. In addition to form and line, contrast in color and texture would also be visible. Prior to arriving at Key View 10, proposed gen-tie structures would largely be back-screened by the chaparral-covered east facing slopes of terrain rising from valley floor however, at Key View 10, back screening opportunities are unavailable and the northernmost gen-tie structure would be visually prominent to passing motorists. As such, the resulting vividness of the key view landscape is assessed as moderately low.

Intactness (2.3)

As shown on Figure 18, the northernmost gen-tie would be located east west of Jewel Valley Road and would largely be skylined. Further, the gen-tie structure would feature a visibly larger bulk and scale than that of existing wooden communication infrastructure installed along Jewel Valley Road and because of the contrasting scale, color and texture, these features would encroach upon the existing visual landscape and may be considered eyesores by passing motorists. As such, the intactness of the existing view and visual patterns of the existing landscape would be negatively affected.

Key View 10–Existing Conditions, facing northwest along Jewel Valley Road

Key View 10–Proposed Conditions, Visual Simulation

DUDEK

7122

SOURCE: DUDEK 2013

FIGURE 18
Key View 10–Existing and Proposed Conditions

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Unity (2.2)

The dull grey color of gen-tie structures would visually contrast with the light tans of foreground soils and rocks and with the dark green to brown color of chaparral vegetation located south and west of the visible pole (see Figure 18). Further, the solid form and grayish color of the gen-tie structure and the dark color exhibit by multiple gen-tie lines terminating at the structure would be skylined and would be pronounced when viewed from an inferior viewing angle. The visibility of project features would be partially dependent on weather and atmospheric conditions however, because the gen-tie structure would be located approximately 475 feet northwest of the key view 10, the mass and scale of the structure would appear large and would not relate to the mass of existing vertical features. Although the gen-tie structure would be located near existing disturbed ranch lands and the visual pattern of the area entails the placement of man-made development adjacent to disturbed areas, proposed development would be located further away from Jewel Valley Road and the inclusion of an additional tall vertical element and multiple electrical lines would break the northwestern horizon line. Due to the presence of existing overhead structures west of Jewel Valley Road motorists would be somewhat prepared for vertical elements in westward oriented views however, the scale and character of proposed gen-tie structures would be visibly different and therefore, the existing unity of the views would be negatively affected.

Viewer Response

Similar to anticipated viewer response at Key View 9 discussed earlier, at Key View 10 Jewel Valley Road motorists and residents in the immediate area would experience the visual changes resulting from the introduction of the proposed project to the Jewel Valley landscape. Residential and motorists are both assumed to have a high visual sensitivity to changes in the landscape and gen-tie structures would remain in the viewshed of northbound motorists as they travel through Jewel Valley. As such, viewer response is anticipated to be high.

Resulting Visual Quality

The visual impact associated with the gen-tie line as viewed from Key View 10 would be moderately high. The vertical form, tall line, and light grey color exhibited by gen-tie structures would grab the attention of passing motorists and the gen-tie structure depicted in Figure 18 would be a dominant form in the landscape. Further, the gen-tie structures would be constructed at a scale and with a character inconsistent with that of existing communication infrastructure currently operating along Jewel Valley Road.

6.3 Assessment of Visual Character and Visual Quality

6.3.1 Assessment of Visual Character

By definition, the addition of highly visible man-made elements in a natural setting would alter the character of the existing landscape. Although existing man-made elements (Tierra del Sol Road, private residences, transmission and distribution infrastructure, and the international border fence) are present, the project setting retains a primarily rural, natural appearance defined by rock outcrops, rolling hills with occasional prominent peaks to the east, and the dense, wide expanses of chaparral vegetation. The project site, a rectangular-shaped property featuring both man-made (SWPL transmission structures and evidence of past ranch land use) and natural (chaparral vegetation, small clusters of pine and cypress trees) elements, as well as gen-tie structure locations and the adjacent landscape would be irrevocably altered by development of the Project.

During construction, existing vegetation would be removed from the solar farm site and at identified gen-tie structure locations. Generally, the removal of vegetation would produce landscapes comprised of stark, exposed granitic soils juxtaposed against a backdrop of relatively dense chaparral-covered terrain. Further, the visual character of the solar farm site area would shift from that of a primarily natural landscape dotted with rural residences to an increasingly developed appearance exemplified by a large cleared area surrounded by natural vegetation. In addition, as development proceeds and project components are installed, the character of the site would begin to take on a more industrial appearance illustrated by the smooth texture and bright spectral color of panels, the strong, vertical form of tracker supports and the grey tones of project components. Also, gen-tie structures (approximately 100-feet tall) would display a bulk and scale larger than that of local electrical and communication infrastructure installed along Tierra Del Sol Road and Jewel Valley Road but would overall be less visually prominent than the large, complex steel lattice structures associated with the Southwest Powerlink (four of which traverse the solar farm site). While several gen-tie poles in the Jewel Valley area would be backscreened by vegetation and terrain, the vertical profile of gen-tie poles and the alignment of the gen-tie line across elevated terrain would create opportunities for these features to vertically extend beyond the horizon line. As such, from multiple viewing locations, gen-tie poles would be silhouetted against the characteristic wide, expansive sky of the project area. At the end of construction, the tall, massive and angular form of trackers and ancillary equipment would define the project site and the proposed project would introduce industrial elements and disparate forms, lines, colors, and textures to the project area.

6.3.2 Assessment of Visual Quality

As described above in Section 6.2, visual impacts resulting from implementation of the Proposed Project are anticipated to range from moderate to high at Key View locations. More specifically, the vividness, intactness, and unity of existing views directed toward the solar farm site would be degraded by the Project as the landscape would be altered by the wholesale removal of natural elements and addition of a multitude of prominent man-made elements. During construction, the intactness and unity of existing views would be abruptly altered by the removal of vegetation from both the solar farm site and gen-tie pole locations. Both expansive, panoramic views and focused, framed views of project area topography covered with chaparral vegetation and rock outcrops would be fundamentally altered by the bold, regular lines associated with the limits of vegetation removal and, at the solar farm site, the sharp line created by bare soil at the skyline. As construction progresses, the installation of project components would add vertical and angular forms and lines that would contrast with the low to moderate form and horizontal line displayed by existing vegetation in the landscape which would further impact the intactness and unity of existing project area views. Once constructed, project components would exhibit contrasting form, line, color, and texture that effectively encroach upon the existing visual quality of the Tierra del Sol and Jewel Valley area.

6.3.3 Assessment of Viewer Response

Construction activities at the solar farm site and along the gen-tie alignment would be visible to residents and motorists in the immediate area. With regards to the solar farm site, the local area topography to the northwest, north, and northeast defines the limits of the solar farm viewshed and effectively confines views of the proposed solar farm to foreground and middle ground viewing locations. While the viewshed associated with the gen-tie would be larger than that of the solar farm due to the vertical profile of individual gen-tie poles (approximately 100 feet tall), most views of these features would be experienced at foreground to middle ground viewing distances and in particular, along Tierra Del Sol Road, Jewel Valley Road, Old Highway 80, and Interstate 8. As such, residents and motorists would be afforded views of construction activities including vegetation removal, limited grading operations, moving equipment, materials stockpiles, and assembly and installation of project components at foreground and middle ground distances over an approximate 12-month timeframe. While impacts would be temporary given the relative short-term nature of construction activities, potential viewer response is assessed as high given an assumed familiarity among both residents and local area motorists with the project area landscape and visual resources. Regional commuters on Interstate 8 are likely to be less familiar with the project area landscape and would therefore be less sensitive to changes in the visual environment. Still, given the remote location of the solar farm site and to a lesser extent, the majority of the gen-tie alignment, and because local area motorists and residents are mostly

likely to be affected by the visual changes associated with implementation of the proposed project, viewer response is assessed as high.

During normal facility operations, residences and motorists would be afforded long-term views of a solar farm facility and a 138 kV gen-tie traversing the Tierra Del Sol, Jewel Valley, and Boulevard area landscapes. In addition to the stark, angular form of trackers and gradual movement of trackers throughout the day, maintenance activities including tracker washing, truck traffic throughout the site and ongoing vegetation management would also be visible. Within the foreground distance, the details of project components and activities would be apparent and the Project in its entirety would adversely affect the existing visual character of the area. In addition to degradation of visual quality resulting from increased visual contrast with surrounding areas displaying a primarily natural appearance, implementation of the proposed project may also entail a perceived industrialization of the larger Boulevard area. Implementation of mitigation measures including vegetation screening, increased setbacks from roadways and parcel boundaries, and undergrounding segments of the gen-tie line could reduce the overall visibility of the proposed project; however, given the scale and industrial character of project components, viewer response to operational activities is anticipated to remain high.

6.4 Determination of Significance

The criteria used to assess the significance of visual impacts resulting from the Proposed Project is derived from the County of San Diego's Guidelines for Determining Significance and Report Form and Content Requirements (Visual Resources). As such, the project is considered to have a significant impact if it proposed any of the following, absent specific evidence to the contrary:

- The project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines.
- The project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings.
- The project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
    - a public road,

- a trail within an adopted County or State trail system,
- a scenic vista or highway, or
- a recreational area.

- The project would not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning.

In addition, the County of San Diego's Guidelines for Determining Significance and Report Form and Content Requirements (Dark Skies and Glare) were also used to assess the significance of visual impacts resulting from the Proposed Project. As such, the project is considered to have a significant impact if it proposed any of the following, absent specific evidence to the contrary:

- The project will install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.
- The project will operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.
- The project will generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property.
- The project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties.
- The project does not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code.

Visual Resources

Guideline 1

The project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size,

massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines.

Impact Analysis

Solar Farm

During the anticipated 14-month construction phase of the Tierra del Sol solar farm short-term visual impacts including the presence of construction vehicles, equipment, materials, and laborers, and the generation of dust during vegetation removal and site grading, would occur. Construction activities would take place between the hours of 7 a.m. and 7 p.m., Monday through Saturday, and therefore, during fall and winter months, nighttime illumination of the project site may be required. Visual impacts from construction activities would primarily be experienced by residents located in the viewshed and afforded clear, unobstructed views of the Tierra del Sol site and motorists on Tierra del Sol Road and smaller local roads such as Tierra Estrella and Tierra Del Road that provide motorists views of the site. Construction activities and resulting visual effects would be noticeable to residents and motorists, impacts would be noticeable to residents and motorists during the 14-month construction period. .

The following project design feature (PDF) would be implemented during construction in order to reduce anticipated aesthetic impacts associated with the visibility of construction activities.

PDF-VIS-1 Staging material and equipment storage areas, including storage sites for excavated materials, visible from nearby roads, residences and recreational areas shall be visually screened using temporary screening fencing. Fencing shall be of an appropriate design and color for the Proposed Project location.

Once constructed, the Tierra del Sol solar farm would create strong visual contrast in form, line, and color with existing elements in the landscape and effects to the existing visual character of the area would be most evident when viewed from a foreground viewing distance. For example, from Key View 2, strong visual contrast in form, line, and color resulting from the removal of rugged, olive green to grey chaparral vegetation and the exposure of underlying light sand-colored soils would be visible. As shown on Figure 10, the rectangular form and horizontal yet broken lines of trackers and the vertical tubular form of tracker components would dominate the foreground view as the closest tracker would be installed approximately 200 feet east of Key View 2.

Similarly, from Key View 3, development of the Tierra del Sol site would replace the rugged, amorphous form of existing green-colored vegetation with the tubular form and grayish color of tracker components, the boxy, horizontal form and lightly colored surface of trackers and a stark

expanse of light sand-colored soil that would dominate the view and become the focal point in the visual landscape (see Figure 11). Due to the vertical form and visual prominence of trackers, the on-site collector substation and O&M annex would likely be screened from view. Figures 10 and 11 show that at a foreground viewing distance, trackers would be visually prominent, would demand the attention of Tierra del Sol motorists, and would effectively alter the quality of the site by removing natural elements (i.e., chaparral vegetation, rock outcrops, topographical variation) and installing and operating a solar farm. A contrasting visual pattern of little unity between solar farm components and the form, line, color, and texture of natural elements in the landscape would result.

While the resulting visual contrast associated with operation and maintenance of the Tierra del Sol solar farm would be apparent when viewed from a middleground viewing distance (i.e., Key Views 1, 4, and 5), the details of solar farm components would be mildly discernible . For example, when viewed from Key Views 1 and 4 (both of which are situated approximately 0.6 mile from the Tierra del Sol site – see Figures 9 and 12), the individual rectangular trackers would be somewhat more difficult to detect. However, the horizontal line of trackers, the color contrast between surfaces, the light sand-color of exposed soils and the olive to drab green of surrounding chaparral vegetation would be discernible. The mounded form of numerous trackers would create a regular, slightly rolling line that would raise and redefine the horizon line (see Figures 9, 12, and 13). Other visible development in the landscape disrupting the continuity of vegetation across the Tierra del Sol solar farm site includes the Southwest Powerlink transmission structures and the vertical lines and large, geometric form of the structures work to disrupt and create breaks in the visual landscape, The existing structures also contribute bold and prominent geometric forms to the local viewshed that are primarily skylined.

The following PDF would be implemented for the Tierra del Sol solar farm in order to reduce aesthetic impacts associated with the introduction of ancillary facilities to the visual landscape.

PDF-VIS-2 The O&M building shall be painted/finished with muted-earth toned colors. Materials, coatings, or paints having little or no reflectivity shall be used whenever possible. New overhead conductors shall be non-specular in design to reduce conductor visibility, glare, and visual contrast.

Implementation of PDF-VIS-2 may help reduce the potentially significant impact to existing visual character and quality of the site and surroundings identified above. The installation of temporary fencing around staging material and equipment storage areas could partially screen these areas from nearby roads, residences and recreational areas. In addition, the use of muted earth-tone colors and materials and coatings displaying little to no reflectivity at the the O&M

building would help the facility to blend in with the existing landscape to the extent practicable. Further, non-specular overhead conductors on the collection system would reduce opportunities for project-generated glare from these features and would slightly reduce the anticipated visual contrast resulting from project implementation. However, even with implementation of PDF-VIS-2 the replacement 420 contiguous acres of native vegetation with uniformly lightly colored CPV trackers placed in uniform rows and the alteration of the horizon line resulting from the introduction of tall CPV trackers would constitute a potentially significant impact pursuant to significance Guideline 1 presented above.

Gen-Tie Line

The six-mile long Tierra del Sol gen-tie line would be supported by approximately 20 to 25 regularly spaced tubular steel poles (approximately 125 to 150 feet tall) that would traverse the ridge and valley landscapes located between the underground transition locations east of Tierra del Sol Road and west of Jewel Valley Road. From the transition point west of Jewel Valley Road, the Tierra del Sol gen-tie would proceed in a northeasterly direction within an underground duct bank to the Rebuilt Boulevard substation. The landscape along the proposed overhead alignment displays a similar visual character as that surrounding the Tierra del Sol site. Construction of the Tierra del Sol gen-tie would entail the introduction of approximately 20 to 25 steel monopoles displaying large, narrow forms, vertical lines, and dull grayish colors. The Tierra del Sol gen-tie line would traverse elevated terrain, with the exception of descending chaparral and boulder covered terrain that would partially backscreen several gen-tie structures located north of Rattlesnake Mountain in the the Jewel Valley area (see Key Views 8 and 9, Figures 17 and 18, respectively).

As viewed from Key View 8, the visual contrast associated with the Tierra del Sol gen-tie line would be very low. As shown in Figure 16, the visual prominence of the Tierra del Sol gen-tie structures would be minimal due to the distance (approximately 1 to 1.4 miles) between the Jewel Valley Road and solar farm components on the western ridgeline. Further, the overall visibility of the Tierra del Sol gen-tie line would be reduced by the partial backscreening of several structures and the screening effect of intervening oak trees. While the vertical form of several gen-tie poles would be skylined and these features would be slightly visible in the westward oriented views of passing motorists, the anticipated visual contrast and impact would be diminished by the presence of existing skylined vertical features in the landscape that currently break the continuity of the western horizon line. In addition, the presence of tall oak trees that dynamically screen the western ridgeline from the view of passing motorists as well as the siting of Tierra del Sol gen-tie structures on terrain of varying elevation reduces the visual contrast associated with form and line by avoiding the introduction of regular lines

displaying consistent height on the western ridgeline. As such, visual impacts at Key View 8 would be less than significant.

Lastly, from Key View 9, the visual impact resulting from introduction of the Tierra del Sol gen-tie line to the Jewel Valley landscape would be moderate. As shown in Figure 17, the majority of visible structures would be back screened by the dark green to brown color of vegetation and local terrain; however, the solid form, and dull grayish color of structures would be noticeable. The uppermost portion of three of the visible structures would be skylined. However, existing electrical and communication infrastructure is present in the landscape along Jewel Valley Road and within the valley. The anticipated visual contrast and impact of the Tierra del Sol gen-tie line would be diminished by the presence of the existing skylined vertical features in the landscape that currently break the continuity of the horizon line. However, the Tierra del Sol gen-tie structures may contrast with the existing character.

Contrary to the superior viewing angle afforded to motorists at Key View 9, an inferior viewing angle is available at Key View 10 as Jewel Valley Road climbs out of the valley and proceeds towards the Boulevard area. The inferior viewing angle available at Key View 10 (see Figure 18) limits opportunities for topographical and vegetation back-screening and as a result, vertical project features would largely be sky-lined as viewed from this location. As shown on Figure 18, the lower portion of the proposed gen-tie structure located closest to Jewel Valley Road (approximately 530 feet west of the roadway) would be obscured by rising terrain however; the vast majority of the proposed structure would rise above the distant low horizon line and would be silhouetted against the sky. In addition, the undeveloped nature of and lack of vegetation on ranch lands located immediately west of wood rail fencing visible in Figure 18 increases the visibility of the proposed structure, conductors, and dark colored gen-tie lines. The lack of intervening vegetation would also enhance the visual contrast between proposed and existing infrastructure in the visual landscape and more specifically, the contrast between the profile (wide), color (grey) and material (steel) of the gen-tie structure and the profile (narrow), color (dark) and material (wood) of existing support poles installed along Jewel Valley Road would be apparent. While the distance between Key View 10 and the proposed gen-tie structure slightly reduces the apparent scale of the feature in the landscape, the scale and mass of the proposed support pole would remain visibly larger than that of existing communication infrastructure along Jewel Valley Road and angular conductors and the stringing of multiple lines between proposed structures is uncharacteristic of existing overhead electrical infrastructure in Jewel Valley.

From the ridge north of Rattlesnake Mountain, the overhead portion of the Tierra del Sol gen-tie would proceed in a southwesterly direction to the underground transition point east of Tierra del Sol Road. Views of this portion of the overhead gen-tie can be seen from Tierra del Road.

Although the landscape and visual setting generally displays a rural character and scale, the 500 kV Southwest Powerlink transmission line that traverses the Tierra del Sol site to the south of the overhead portion of the gen-tie line, as well as existing vertical structures in the landscape (local electrical and communication infrastructure) contribute to the visual setting. As viewed from Key Views 6 and 7, the introduction of the Tierra del Sol gen-tie line would create visual contrast with existing natural and man-made features in the Tierra del Sol landscape (see Figures 14 and 15). More specifically, the introduction of the tall, vertical form, regular line, and dullish gray color of the Tierra del Sol gen-tie structures to the composite valley and ridgeline landscape would produce noticeable visual contrast with the short form, rugged line, and green to brown hues of surrounding vegetation. While the apparent size/scale of distant Tierra del Sol gen-tie structure would be diminished by distance, the skylined effect of structures would remain apparent to passing motorists and local residents and the bulk and scale of the transition pole would remain prominent in the landscape (see Key Views 6 and 7, Figures 14 and 15). Moreover, the tall, bold form of the transition structure would appear abruptly in the landscape and would display short, horizontal, and metallic crossarms not currently exhibited in the surrounding area by existing infrastructure. Further, the disparity between the rural character of existing vertical infrastructure and the metallic, industrial character of proposed gen-tie structures would be evident. Also, as depicted in Key View 6, the placement of gen-tie structures through the valley would be exhibit a zig-zag organization as opposed to a straight linear arrangement displayed by existing support poles alongside Tierra del Sol Road. The jumbled arrangement of visible gen-tie structures and multiple crisscrossing and sagging transmission lines would produce slight visual chaos and would not resemble the straight, horizontal lines displayed by existing infrastructure in the landscape. Lastly, the sky-lined effect of multiple gen-tie structures piercing the distant horizon line would interrupt the existing open, broad and natural composition of the view and the existing vividness, intactness and unity of the visible landscape would be affected.

The following PDF would be implemented for the Tierra del Sol Gen-Tie in order to reduce aesthetic impacts associated with operation and maintenance of the gen-tie line.

PDF-VIS-3 Either weathered or cor-ten steel shall be used for gen-tie monopoles to reduce the potential for color contrast between structures and existing vegetation and terrain.

PDF-VIS-3 and the use of weathered or cor-ten steel could reduce the anticipated color contrast of the gen-tie line where new steel poles are backscreend by existing vegetation and terrain. The weathered or cor-ten finish could help structures to visually blend in with existing background elements in the landscape. While PDF-VIS-3 would help to reduce visual contrast resulting from introduction of the gen-tie, several gen-tie poles visible from Tierra del Sol Road and Jewel Valley Road would rise above the horizon line and would be skylined. In these instances, use of weathered steel, cor-ten steel or neutral paint palettes would not reduce the visual contrast

associated with tall, skylined gen-tie structures viewed against the expansive desert sky however, the weathered, brown finished would be consistent with the color displayed by existing electrical and communication infrastructure along Tierra del Sol Road and Jewel Valley Road. As such, the Tierra del Sol gen-tie alignment could result in potentially significant impacts to the visual character and quality of the area.

Significance of Impact

Impacts to visual character and quality resulting from the development of the Tierra del Sol solar farm and gen-tie line would be potentially significant as it pertains to Guideline 1.

Mitigation Measures

Incorporation of landscape screens running the length of Tierra del Sol Road where the road is adjacent to the solar farm site (Mitigation Measure M-VIS-1) as specified in Section 6.0, Visual Mitigation and Design Alternatives, and in greater detail in the Landscape Screen Design Report for the Soitec Solar Development Program EIR (Dudek 2013) would break up the mass and scale of trackers, block views of trackers and other project component from critical mobile and stationary viewpoints, and create visual interest to divert attention away from trackers. However, the complete screening of views from public viewpoints to the proposed solar facilities is not possible as CPV trackers (approximate height of 30 feet above ground surface) would rise above the crowns of installed trees and shrubs. Trackers would also remain partially visible beyond the landscape screen due to the plant density limitation that is required to achieve wildfire protection standards. Therefore, because landscape screens would be incapable of fully screening project facilities from view and because mitigation measures that would further reduce anticipated visual impacts were determined to be infeasible or ineffective (see Section 5.7, Summary of Project Impacts, Significance and Conclusions), impacts to existing visual character and quality resulting from development of the solar farm and the gen-tie would remain significant and unmitigable (VIS-1).

Guideline 2

The project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings.

Impact Analysis

Potential impacts to the existing character of the project area resulting from vegetation removal and general development of the project site and gen-tie line are discussed under Guideline 1, above.

Solar Farm Site

While the project would not remove or physically alter designated landmarks or historic resources, project construction would entail the removal of existing vegetation including a small, but prominent grouping of pine trees and a small cluster of Tecate Cypress trees from the solar farm site. The pine trees are situated atop the prominent ridge traversing the western portion of the solar farm and partially define the horizon line by contribute vertical, spreading forms to the visual environment. While on-site pine trees are visible to motorists and residents, they are not strongly associated with the rural visual character of the surrounding area. Further, pine trees are relatively uncommon in the Tierra Del Sol community and the isolated cluster on the project site suggests that these trees were installed for ornamental purposes. Therefore, for purposes of this analysis, on-site ornamental pine trees are not considered valuable features that contribute to the overall character of the community and as such, impacts to these features would be considered less than significant. Also, the cluster of Tecate Cypress trees located in the southeastern portion of the project site is generally not visible from accessible public viewpoints in the surrounding area. Therefore, because the viewshed associated with these trees is limited to portions of the project site and does not generally extend to off-site areas, on-site Tecate Cypress trees are not considered critical natural features that comprise or contribute to the valued visual character of the community or local area. As such, visual impacts associated with removal of these resources would be considered less than significant.

Lastly, a small rock outcrop is located in the western limits of the solar farm site and would be within the boundary of an identified fuel modification zone. The outcrop is comprised of a handful of moderately sized, white granitic rocks and given the occurrence of larger, more prominent outcrops to the west near Rattlesnake Mountain, the on-site outcrop is not considered a significant contributing feature to the visual character of the community and local area. As such, development of the solar farm site would result in less than significant impacts associated with the removal of change of features contributing to the visual character of the area.

Gen-Tie Line

Development of the gen-tie line is not anticipated to result in the removal of existing trees, rock outcrops, or designated landmarks. In addition, construction and operation of the gen-tie line

would not result in the removal or direct alteration of historic resources in the project area landscape. As such, no impacts associated with the removal of scenic features would occur.

Significance of Impact

Impacts to designated scenic features would be less than significant.

Mitigation Measures

Impacts related to designated scenic features would be less than significant and therefore, no mitigation measures would be required.

Guideline 3

The project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:

- a public road,
- a trail within an adopted County or State trail system,
- a scenic vista or highway, or
- a recreational area.

Impact Analysis

Solar Farm Site

The Tierra del Sol solar farm would be visible from Tierra del Sol Road (a public road) at varying levels of visibility based on distance and topography. While the majority of Key Views considered and analyzed for the Tierra del Sol solar farm are located on Tierra del Sol Road, there are no designated or known valued focal points on the roadway within the viewshed. Relatively wide, expansive and continuous views of the project area are however available from the roadway (see Key Views 1, 4, and 5) but, as viewed from these locations, trackers would display largely horizontal forms and lines and the introduction of these features would not substantially obstruct, interrupt, or detract from existing available views (see Figures 9, 12, 13). The duration of the viewer experience of the Tierra del Sol solar farm from middleground viewing distances on Tierra del Sol Road (such as from Key Views 1 and 4) would generally last for approximately 1.3 minutes or less depending on intervening topography and vegetation. From foreground viewing distances on Tierra del Sol Road (i.e., Key View 2 and 3), the duration of viewer experience would be longer (approximately 2.2

minutes) on account of increased proximity to solar farm components and general lack of intervening features in the landscape. However, because there are no designated or known valued focal and/or panoramic vistas available on the roadway, impacts to scenic vistas from a public road would be less than significant.

There are no recreational areas or designated scenic vistas or highways (including area roadways included in the County Scenic Highway System) located within the viewshed of the Tierra del Sol solar farm and therefore, the Tierra del Sol solar farm would not affect these facilities. The site would be visible from several trails associated with the Boulevard Community Trails and Pathways Plan including the Shockey Truck, Lansing, Tierra del Sol, and San Diego and Arizona Eastern Railway trails however, as stated in Section 5.2.2, these trails are existing unimproved access roads (or are located along roadway rights-of-way) that primarily traverse private lands. Therefore, as no public right-of-way has been established to date and easements have not been acquired, these trails are not considered established recreational facilities and they are not further discussed in this analysis.

Gen-Tie Line

The height of Tierra del Sol gen-tie structures would produce a relatively wide viewshed that would include portions of Tierra del Sol and Jewel Valley. Based on the local area topography and the approximate height (125 to 150 feet) of support poles, views of the gen-tie (lines and support structures) are anticipated to be limited from Interstate 8, SR-94, and Old Highway 80. Interstate 8 and SR-94 are eligible state scenic highways and Old Highway 80 (as well as Interstate 8 and SR-94) are included in the County's Scenic Highway System.

Views of Tierra del Sol gen-tie structures would be briefly available to east and westbound motorists on Interstate 8. More specifically, views of gen-tie structures would be available to eastbound interstate motorists through two viewing windows. Near the Golden Acorn Casino, views would be intermittently available along a discontinuous and approximate 1.2-mile segment of the interstate, and between the Tecate Divide and Ribbonwood Road views would be available along a discontinuous and approximate 1.5-mile segment of the interstate. Westbound motorists would be afforded views of the gen-tie structures along a discontinuous 1.5-mile segment of the interstate between the large Rio Bend RV Resort billboard (located south of Interstate 8) to Ribbonwood Road.

While viewing opportunities from the eastbound travel lanes would generally be greater due to the superior viewing angle and higher elevation location of motorists, views from the eastbound travel lane as the interstate descends into the McCain Valley area relatively expansive, stretching north to the Laguna Mountains and south into Mexico. In addition, at the closest point, Tierra del

Sol gen-tie structures in Jewel Valley would be located approximately 1.5 miles from the interstate and the distance, as well as intervening topography, would diminish the visibility of structures in the landscape. Further, intervening topography would limit the visible portion of Tierra del Sol gen-tie structures in Jewel Valley such that only those structures located on higher elevation areas (such as that traversing terrain near Rattlesnake Mountain) may be viewed in their entirety. These structures would be located nearly 3 miles from the interstate, would be partially backscreened by the distant Sierra de Juarez Mountains, and would not be visually prominent. Views of Tierra del Sol gen-tie structures may also be visible to westbound interstate motorists but the structures would be located nearly 2 miles south of the westbound travel lanes near McCain Valley Road and would not be visually prominent. Several structures in the Jewel Valley area would be located atop a ridgeline and would be skylined. From the interstate, the Tierra del Sol gen-tie structures would appear distant (distance would reduce the apparent size of structures) and road cuts would limit the availability of continuous southerly views from the interstate. Because the Tierra del Sol gen-tie structures would be distant features in the landscape and because views would be brief and broken by the presence of existing topographical features, the Tierra del Sol gen-tie line would not substantially obstruct or interrupt from a valued focal point or panoramic vista available on the interstate and impacts would be less than significant.

Based on the proposed height of structures and local topography, the Tierra del Sol gen-tie viewshed may also extend to segments of Old Highway 80 located north and east of the gen-tie alignment. According to the viewshed map, views of Tierra del Sol gen-tie structures may be available to eastbound motorists along an approximate 0.80 mile segment of the highway to the north between Tierra Heights Road and SR-94 and an approximate 0.35 mile segment of the highway to the east between Starship Gate and Starship Lane. As viewed from the segment of the highway to the north, gen-tie structures would be distant features in the landscape (the nearest structure would be located approximately 1.3 miles to the southeast) and intervening topography and vegetation would partially screen structures from view. From the eastern segment of the highway, views of the Tierra del Sol gen-tie structures may be available to westbound motorists between a series of tall, boulder- covered hills located west of the highway however, views would be brief and made in passing and structures would be located more than 3 miles from the highway. As such, the apparent size of structures would be reduced and the screening effects of local topographical features would reduce the overall visibility of the Tierra del Sol gen-tie line. Further, the screening effect would be dynamic and would remain relatively consistent due to the presence of multiple tall topographical features. Therefore, because views would be made in passing and would not be constant along the highway, the Tierra del Sol gen-tie line would substantially obstruct or interrupt from a valued focal point or panoramic vista available on the interstate and impacts would be less than significant.

According to the viewshed map (see Figure 6), the Tierra del Sol gen-tie line may be visible along an approximate one mile long segment of SR-94, generally between Tierra del Sol Road and Old Highway 80. Along this segment the nearest structure would be located approximately one mile from the roadway and southerly views of the Tierra del Sol gen-tie line would generally be screened by existing vegetation. In addition, southerly views along the identified segment of the SR-94 includes sloping terrain covered in dense chaparral vegetation and while natural, the southern landscape lacks particularly bold focal points. On the other hand, the view to the east includes the undulating ridgelines of the distant Sierra De Juarez Mountains and therefore, the easterly views from the roadway are assumed as the focal point of visual interest for motorists. Therefore, the Tierra del Sol gen-tie line would not obstruct or interrupt from a valued focal point or panoramic vista on the roadway and impacts would be less than significant.

In addition to scenic highways, the Tierra del Sol gen-tie line viewshed would extend to segments of public roads in the project area, most notably, Tierra del Sol Road and Jewel Valley Road. According to the viewshed map, the visibility of the Tierra del Sol gen-tie would be intermittent along the Tierra del Sol Road between SR-94 and into Tierra del Sol proper and views would be partially screened by existing vegetation south of Tierra Real Road. It should be noted however that oak trees and other vegetation adjacent to Tierra del Sol Road through the community recently burned during the September 2012 Shockey Fire and the screening effect of mature trees has been affected. Still, the local topography may partially screen views of structures along the southbound lanes of the roadway such that a portion of structures may be visible. Visual effects associated with the Tierra del Sol gen-tie line as viewed from the northbound travel lanes of Tierra del Sol Road are analyzed in Section 2.1.3.3 (see Key Views 6 and 7) and, due to the introduction of disparate forms and lines to the landscape, the Tierra del Sol gen-tie line could negatively affect the visual character of the landscape as viewed from the roadway. However, despite the relatively broad composition of the existing landscape, the middle ground ridgeline limits the physical extent of the view (see Key View 6) and therefore, the view is not considered overly panoramic. Lastly views of the characteristic ridge and valley landscape including the prominent form of Rattlesnake Mountain of the Jewel Valley area are available from Jewel Valley Road (see Key Views 8 and 9). However, as viewed from Key View 8, the structures would not be overly prominent or bold features in the landscape and existing oak trees would create gaps in the visibility of structures. In addition, as viewed from Key View 9, the vertical profile of most structures would not pierce the horizon line and structures would not obstruct or screen views of Rattlesnake Mountain, a focal point in the existing landscape. Further, the Key View 8 and 9 landscapes are relatively limited in extent by local area ridgelines located in the foreground viewing distance and therefore, these views are not considered panoramic. Therefore, the Tierra del Sol gen-tie line would not detract from a visual focal point

available along local areas roadways and would not detract or obstruct available panoramic views. As such, impacts would be less than significant.

Significance of Impact

The availability of panoramic views from area roadways is limited and due to motorist speed and focus, views to the solar farm site and gen-tie line would be short-term and made in passing. In addition, there are no designated focal points along local area roadways that would be affected by the project. Therefore, impacts to valued focal points or panoramic vistas would be less than significant.

Mitigation Measures

Impacts related to valued focal points or panoramic vistas would be less than significant and therefore, no mitigation measures would be required in the context of Guideline 3.

Guideline 4

The project would not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning.

Impact Analysis

Prepared by County staff, the *Tierra del Sol Solar Farm General Plan Analysis Report* (Appendix 2.5-1 to the Soitec Solar Development Program EIR) includes a detailed consistency analysis concerning the Tierra Del Sol solar farm project and applicable County plans, including the County's General Plan, Mountain Empire Subregional Plan, and the Boulevard Subregional Plan. As stated in the General Plan Analysis Report, the Tierra del Sol project would not conflict with applicable visual resource goals and policies found in the County General Plan. Further and as detailed in the General Plan Analysis Report, the Tierra del Sol solar farm project would not conflict with the applicable goals and policies of the Mountain Empire Subregional Plan.

The Tierra del Sol project would also be in conformance with the goals and policies of the Boulevard Subregional Plan as amended by the Wind Ordinance POD 10-007 General Plan Amendment (GPA 12-003), adopted by the Board of Supervisors on May 15, 2013. However, the Wind Ordinance POD 10-007 has been challenged in court [County Counsel to provide case name and number to reference here]. If the Board of Supervisor's decision is reversed, the project would conflict with several applicable visual resource policies of the Boulevard Subregional Plan, including policies LU-1.1.1, LU-1.1.2, LU-1.1.3, LU-6.1.1, LU-6.1.2, and LU-6.1.3 (see Section 2.5.2 for full text of identified policies). In the event that the Wind Ordinance POD 10-007 General Plan Amendment (GPA 12-003), a General Plan Amendment

would be processed for the Tierra del Sol project requesting an exception for the project from the policies listed above.

Significance of Impact

As discussed above, the Project would result in a less than significant impact regarding compliance with policies established in an applicable local plan regarding the protection of visual resources. Per the Wind Ordinance POD 10-007 General Plan Amendment (GPA 12-003), adopted by the Board of Supervisors on May 15, 2013, the Tierra del Sol Project is consistent with the goals and policies of the Boulevard Subregional Plan. However, if the Board of Supervisors decisions is reversed (the Wind Ordinance POD has been challenged in court), a General Plan Amendment would be processed.

Mitigation Measures

Impacts related to local goals, policies and requirements would be less than significant.

Dark Skies and Glare

The following significance guidelines guide the evaluation of whether a significant impact to dark skies or from glare will occur as a result of project implementation. A project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary. Conversely, if a project does not propose any of the following, it will generally not be considered to have a significant effect on dark skies or from glare, absent specific evidence of such an effect:

Guideline 1

The project will install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

Guideline 2

The project will operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code.

Guideline 3

The project will generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property.

Impact Analysis

Solar Farm Site

Construction is anticipated to occur during hours permitted by the County of San Diego and therefore, nighttime lighting to accommodate construction activities would not normally be required. However, during fall and winter months when sunset would occur prior to 7 p.m., lighting during nighttime hours may be required. Although lighting would be briefly operational, nighttime lighting could affect the views of residents in the project area (residents are located in close proximity north and west of the solar farm site) which is generally devoid of significant nighttime lighting sources. To minimize potential lighting impacts, all lighting at the site would comply with the County of San Diego Light Pollution Code Section 59.101 et al. in regards to both general requirements (i.e., use of low-pressure sodium lamps, shielded light fixtures, hours of operation limitations) and lamp type and shielding requirements for Class II lighting in Zone B (areas outside of a 15 mile radius centered on the Mount Laguna Observatory). Therefore, nighttime lighting impacts during construction of the Tierra Del Sol Solar Farm would be less than significant.

Class II security lighting and general nighttime lighting for operation and maintenance personnel would be installed at the solar farm site. Specifically, outdoor lighting would be installed at the operations and maintenance annex, atop entrance gates to the site, and at the collector substation to allow for safety inspections or maintenance that may be required during evening hours. Nighttime activities at the operations and maintenance annex and collector substation would be limited and the lights installed at these facilities for maintenance purposes would typically be turned off when not in use. In the event that emergency conditions warranted nighttime lighting, impacts would be minimal as all light bulbs would be less than 100 watts and would be shielded and directed downward. As stated above, all lighting at the site would comply with the County of San Diego Light Pollution Code Section 59.101 et al. in regards to both general requirements (i.e., use of low-pressure sodium lamps, shielded light fixtures, hours of operation limitation) and lamp type and shielding requirements for Class II lighting in Zone B (areas outside of a 15 mile radius centered on the Mount Laguna Observatory). Tracker washing would occur during evening hours when modules are in sleep procedure and facing the western horizon and would require temporary illumination of the module surface. Lighting used during the washing process would be transient (trucks would visit each individual module to wash and would not illuminate any one area for a prolonged duration) and lighting would be focused onto the modules as opposed to into the nighttime sky. Therefore, nighttime lighting associated with operational activities at the Tierra Del Sol Solar Farm would be less than significant.

Gen-Tie Line

Similar to construction of the solar farm site, construction of the gen-tie line is anticipated during hours permitted by the County of San Diego; however, during fall and winter months lighting during nighttime hours may be required. Although lighting would be briefly operational, nighttime lighting could affect the views of residents located along the gen-tie alignment. All construction lighting would comply with the County of San Diego Light Pollution Code Section 59.101 et al. in regards to both general requirements (i.e., use of low-pressure sodium lamps, shielded light fixtures, hours of operation limitations) and lamp type and shielding requirements for Class II lighting. Therefore, lighting impacts associated with construction of the gen-tie line would be less than significant.

Gen-tie structures (approximately 125 to 150 feet tall) would not exceed the 200 foot height threshold established by the FAA that requires the installation of obstruction lighting and marking for vertical structures. As such, the gen-tie structures would not generate day or nighttime lighting and no visual impacts would occur.

Significance of Impact

As discussed above, lighting impacts associated with the Tierra Del Sol solar farm and gen-tie would be less than significant.

Mitigation Measures

Because no significant impacts are associated with this Guideline, mitigation measures beyond the proposed Project design features and those measures proposed to satisfy other separate impacts would not be necessary.

Guideline 4

The project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties.

Guideline 5

The project does not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code.

Impact Analysis

Solar Farm

Under normal operating conditions, proposed trackers would be engaged in one of three operational cycles: wake procedure, tracking mode, and sleep procedure. During wake procedure, solar trackers would rotate into an east-facing position prior to sunrise. Once the sun reaches an elevation of 5 degrees, the trackers would follow the sun until it reaches a vertical position facing west 5 degrees (Power Engineers 2013). Throughout the tracking procedure, the position of the tracker would be directly perpendicular to the sun's rays and in a perfect scenario reflections would bounce directly back to the sun. However, to account for slight deviations in panel tracking movement and surface light scattering, the Boulevard Glare Study prepared by Power Engineers assumed a 1 degree light spread from the face of the panel resulting in reflections never lower than 4 degrees off horizon. Once the trackers reach a vertical position facing west 5 degrees the evening sleep procedure would commence. During the sleep procedure trackers would assume a fixed, near-vertical position and would remain in this position until just before sunrise when the wake procedure commences (Power Engineers 2013). Trackers would also remain in a near-vertical position when the modules undergo cleaning or maintenance.

The Boulevard Glare Study identified seven residences located within one mile of the proposed solar equipment at the Tierra del Sol site as having potential to receive project-generated glare (Power Engineers 2013). Two of the identified residences are located west of the solar farm site and the remaining five residences are located to the north. The general location of the identified residences, as well as the approximate distances between residences and solar equipment and the approximate height of the elevated view above the Tierra del Sol site afforded to each residence, is listed in Table 4.

Table 4
Identified Residences within One-Mile of Solar Equipment

Residence[1]	Location	Proximity to Solar Equipment	Elevated View Above the Tierra del Sol Site[2]
1	West of project site	221 feet	0 feet
2	West of project site	300 feet	0 feet
3	North of project site	375 feet	10 feet
4	North of project site	445 feet	10 feet
5	North of project site	390 feet	22 feet
6	North of project site	615 feet	25 feet
7	North of project site	541 feet	27 feet

Source: Power Engineers 2013

1 For location of residences please refer to the Boulevard Glare Study.

2 North of the solar farm site the terrain rises in elevation. As such, residences to the north of the site identified as having potential to receive glare are located at a higher elevation than the project site and proposed CPV trackers.

In addition to residences located west and north of the Tierra del Sol site, motorists on Tierra del Sol Road would also be afforded views of the site and may receive project-generate glare. Due to distance and glare angle, glare would be almost 2,000 feet up in the air when passing over Interstate 8 and therefore, interstate motorists would not be exposed to project glare. The anticipated glare impacts to residents and motorists are discussed below.

Residents

As shown in Table 5, residents located west and north of the Tierra del Sol site and within one mile of solar equipment would likely receive glare generated by the Tierra del Sol solar farm. Glare reflection heights at a distance of one mile from solar equipment are approximately 370 feet above the elevation of solar equipment. Therefore, because the Boulevard Glare Study determined that there are no residences located 370 feet or higher in elevation in comparison to the project site and solar equipment, the one-mile distance was used to determine potential recipients of glare in the project vicinity. According to the Boulevard Glare Study, glare would be received throughout the year at two residences located west of the solar farm site and glare exposure would be limited to summer months at five residences located north of the solar farm. Table 5 presents a worst-case glare scenario for the seven identified residences throughout the year and represents the anticipated daily duration of glare exposure during each season of the year.

Table 5
Maximum Anticipated Glare by Season – Tierra del Sol

Residence	Season[1]			
	Spring	*Summer*	*Autumn*	*Winter*
1	53 minutes (6:04 p.m. to sunset)	60 minutes (6:56 p.m. to sunset)	53 minutes (5:48 p.m. to sunset)	46 minutes (3:58 p.m. to sunset)
2	53 minutes (6:04 p.m. to sunset)	60 minutes (6:56 p.m. to sunset)	53 minutes (5:48 p.m. to sunset)	46 minutes (3:58 p.m. to sunset)
3	No glare	33 minutes (7:23 p.m. to sunset)	No glare	No glare
4	No glare	30 minutes (7:26 p.m. to sunset)	No glare	No glare
5	No glare	29 minutes (7:27 p.m. to sunset)	No glare	No glare
6	No glare	30 minutes (7:26 p.m. to sunset)	No glare	No glare
7	No glare	30 minutes (7:26 p.m. to sunset)	No glare	No glare

Source: Power Engineers 2013
Notes:
1 Spring Equinox (March 20, 2013, sunset 6:57 p.m.), Summer Solstice (June 21, 2013, sunset 7:56 p.m.), Autumnal Equinox (September 22, 2013, sunset 6:41 p.m.), and Winter Solstice (December 21, 2013, sunset 4:44 p.m.) were analyzed to establish seasonal trends to predict the occurrence of glare throughout the year.

As shown in Table 5 above, the daily duration of glare exposure throughout the year would be one hour or less at the two identified residences located west of the solar farm site and during summer months, the daily duration of glare exposure at the five identified residences located north of the site would be less than 35 minutes. According to the Boulevard Glare Study, glare would not be received at the five identified residences located north of the solar farm during spring, autumn and winter months (Power Engineers 2013). During summer months, project-generated glare would pass over residences located north of the project site as a result of several factors including proximity to trackers and elevation change. The intensity of glare produced by CPV modules would be lower than that of man-made surfaces (metal roofs, glass, etc.) and water. In addition, the generated reflection values are not considered hazardous to vision (Power Engineers 2013). The project would however create daytime glare that would be visible from adjacent residential properties and at areas presumably used for private outdoor activities on those properties and therefore, according to the County of San Diego glare significance guidelines, impacts would be potentially significant.

Motorists

According to the Boulevard Glare Study, motorists on Tierra Del Sol Road would receive glare throughout the year along the segment of the roadway that abuts the western and northern solar farm boundary (Power Engineers 2013). Project generated glare was recorded along this approximate one-mile segment of the roadway with daily duration not exceeding two hours. The anticipated daily duration of glare exposure along Tierra Del Sol Road by season is provided in Table 6, below.

Table 6
Maximum Anticipated Glare by Season – Tierra del Sol (Motorists)

Milemarker[1]	Season[2,3]			
	Spring	*Summer*	*Autumn*	*Winter*
M 1-1.1	38 minutes	47 minutes	36 minutes	17 minutes
M 1.1-1.2	40 minutes	55 minutes	40 minutes	26 minutes
M 1.2-1.3	31 minutes	96 minutes	31 minutes	No glare
M 1.3-1.4	No glare	107 minutes	No glare	No glare
M 1.4-1.5	No glare	120 minutes	No glare	No glare
M 1.5-1.6	No glare	99 minutes	No glare	No glare
M 1.6-1.7	No glare	99 minutes	No glare	No glare
M 1.7-1.8	No glare	109 minutes	No glare	No glare
M 1.8-1.9	No glare	115 minutes	No glare	No glare
M 1.9-2	No glare	113 minutes	No glare	No glare

Source: Power Engineers 2013
Notes.
1 M = mile marker. The Boulevard Glare Study provides the anticipated daily duration of glare received by motorists over the approximate one-mile segment of Tierra Del Sol Road (as measured from west to east) exposed to project-generated glare in 0.10-mile increments.

Milemarker 1 is located along the western project boundary where the road abuts the project site and milemarker 2 is located along the northern project boundary where Tierra Del Sol turns and proceeds northwards toward the SD&AE railroad.

[2] Spring Equinox (sunrise 6:49 a.m., sunset 6:57 p.m.), Summer Solstice (sunrise 5:38 a.m., sunset 7:56 p.m.), Autumnal Equinox (6:34 a.m., sunset 6:41 p.m.), and Winter Solstice (6:44 a.m., sunset 4:44 p.m.) were analyzed to establish seasonal trends to predict the occurrence of glare throughout the year.

[3] During spring glare was recorded in the evening hours between 6 p.m. and sunset and during summer glare was recorded in both morning hours between sunrise and 7 a.m. and evening hours between 7 p.m. and sunset. During fall, glare was recorded in the evening hours between 6 p.m. and sunset and in the winter between 4 p.m. and sunset. The duration of glare exposure presented in Table 6 is the total duration exposure over a day.

As shown in Table 6, the daily duration of glare exposure would be longest during the summer months and glare would be received on the roadway following sunrise and prior to sunset. Tierra Del Sol Road motorists would experience both focus glare (glare received within the 60 degree angle of the cone of vision) and peripheral glare (glare experienced outside of the 60 degree angle of the cone of vision) as they pass the project site. For example, during summer, focus glare would be received by motorists following sunrise and during the last hour leading up to sunset (refer to the Boulevard Glare Study for approximate times during which motorists would receive glare). Throughout the remainder of the year, peripheral glare would be received by motorists passing the solar farm site and would be less pronounced than focus glare. During spring, fall and winter months, the daily duration of glare exposure would be 40 minutes or less (daily exposure during winter would be 26 minutes or less) and glare would be received by eastbound motorists approaching the project site prior to sunset. Although the generate glare reflection values are not considered hazardous to vision, the project would create daytime glare that would be visible from a nearby public roadways. Therefore, according to the County of San Diego glare significance guidelines, impacts would be potentially significant.

Gen-Tie Line

Because the gen-tie line would entail the introduction of tubular steel poles to the existing landscape, glare is most likely to be an issue associated with operation of the gen-tie line. Project-generated glare could potentially occur if new reflective surfaces were added to the landscape and affect the existing daytime views of residents; however, tubular steel poles would display a dull, weathered finish that would minimized the potential for generated glare and gen-tie conductors would be non-specular in design to reduce visibility, glare and anticipated visual contrast. Therefore, project-generated glare associated with the gen-tie line is anticipated to be less than significant.

Significance of Impact

Operation of the Tierra del Sol Solar Farm Project would generated glare that would be received by residents located west and north of the site and by motorists on Tierra Del Sol Road and smaller local road. According to the Boulevard Glare Study the anticipated glare reflection

values are not considered hazardous to vision however, the project would generate glare that would be visible from public roadways and adjacent properties. Therefore, per Guideline 4 of the County's Dark Skies and Glare guidelines, impacts are considered potentially significant.

Mitigation Measures

During operation of the Tierra del Sol solar farm, glare would be received by 2 residences to the west, 5 residences to the north, and by motorists along an approximate 1-mile segment of Tierra del Sol Road located adjacent to the northern and western project boundary. The intensity of glare produced by CPV trackers would be less than that of metal, glass, and water and the generated reflection values are not considered hazardous to vision. Implementation of Mitigation Measure M-VIS-1 would entail the installation and maintenance of landscape screens along the length of Tierra del Sol Road located adjacent to the northern and western project boundary that would partially block views of trackers from identified residences and motorists within a foreground viewing distance of the solar farm. While screens would partially block views of trackers, project-generated glare would be received by adjacent properties to the west and north by motorists on Tierra Del Sol Road. Therefore, even with implementation of Mitigation Measure M-VIS-1, impacts would remain significant and unmitigable (VIS-2).

6.5 Cumulative Impact Analysis

According to CEQA Guidelines Section 15335 "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable and compound/increase other environmental impacts. Therefore, for purposes of this study, the individual impacts of the proposed project as well as the impacts associated with select projects in the cumulative study area are considered in this cumulative impacts analysis. Regarding the consideration of time, the CEQA guidelines (specifically, Section 15335 (b)) require that the cumulative impacts analysis consider the change in the environment resulting from the proposed project in conjunction with other closely related past, present, and reasonably foreseeable probable future projects. Therefore, the cumulative impacts analysis presented below considers the potential incremental effects of the Proposed Project when added to similar impacts from other actions in the vicinity.

Methodology

For purposes of this cumulative impact analysis, cumulative visual effects are evaluated for the periods of project construction and for post-construction. In addition, the project viewshed (also referred to as the Tierra del Sol viewshed in this report) will be used as the physical boundary from which to determine cumulative visual effects. Use of the project viewshed is appropriate given the type and extent of the project's visual impacts and given the nature of the local topography which would limit off-site views to the proposed project to a distance of approximately 2 miles from the

project boundary. In addition, this cumulative boundary is appropriate and was selected as it would include projects that would have the potential to change the visual character of the Tierra del Sol community, in particular, the existing visual character along Tierra del Sol Road.

As stated above, the impacts of an individual project may be cumulatively considerable when the added to those of other closely related past, present, and reasonable foreseeable future projects. The term "reasonably foreseeable" refers to projects that federal, state, or local agency representatives have knowledge of either from pre-application meetings or from the formal application process. Three projects have been identified with the Tierra del Sol viewshed. The projects in the cumulative scenario are primarily renewable energy generation projects (similar to the proposed project) however, a communication tower, which could generate visual impacts similar to those of the proposed project's 138 kV transmission line, is also considered. With the exception of the EGP Wind Project, which would be located on County lands, there are no known recently approved, pending, or future projects under San Diego County's jurisdiction in the cumulative study area which would generate visual impacts similar to those of the proposed project.

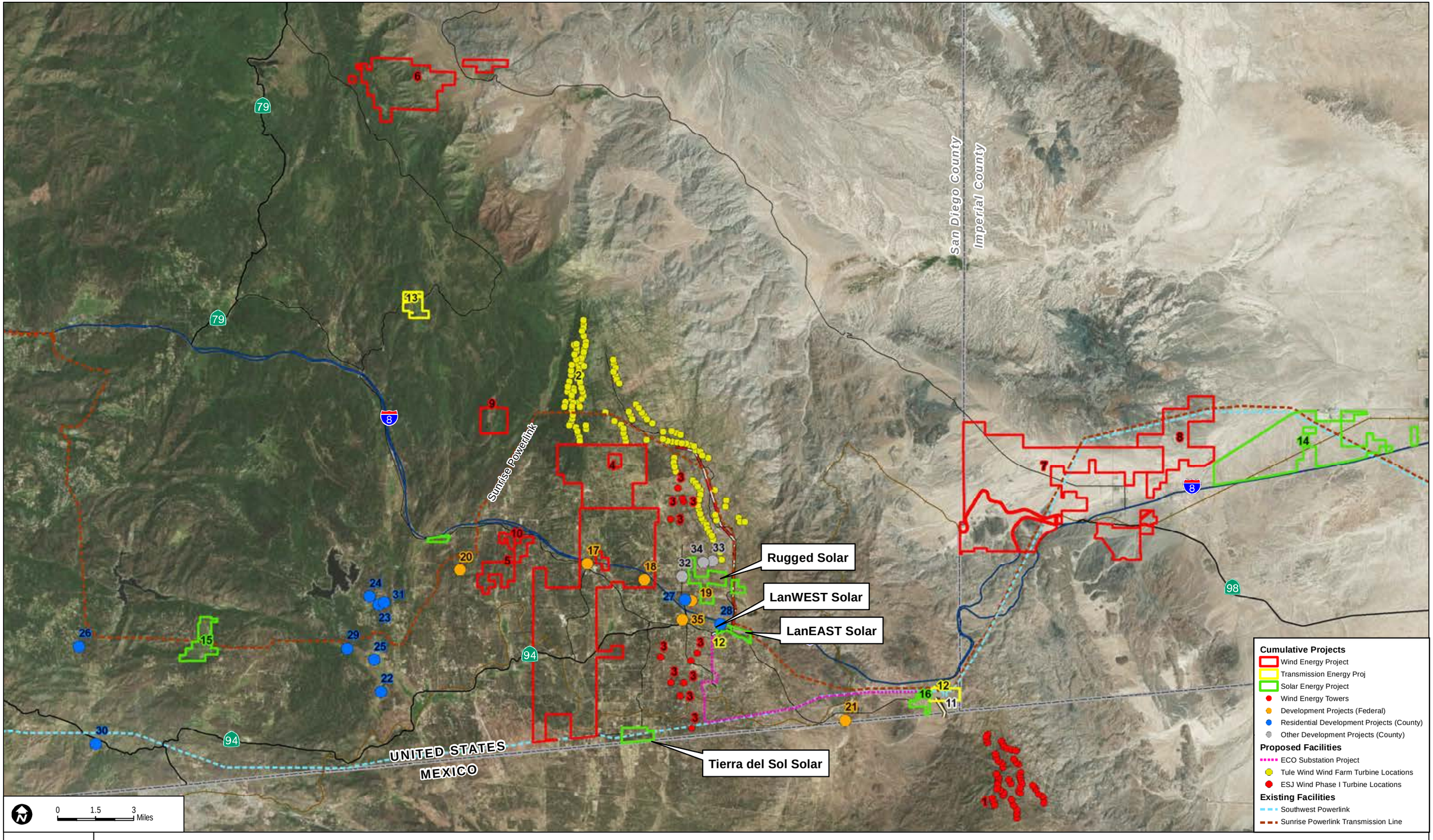
Reasonably Foreseeable Projects

As shown on Figure 19, several large scale energy and transmission projects have been identified in the region along the Interstate 8 corridor however, given the limited extent of the Project viewshed, the majority of these projects would not be located in the Tierra del Sol cumulative analysis viewshed as defined above. All known recently approved, pending, or future projects within the region have been identified for geographic context and spatial relationship understanding in Figure 19.

The following project is considered to be reasonably foreseeable within the temporal and spatial limits identified for this cumulative impact analysis and may result in similar visual impacts as the Proposed Project.

EGP Wind

The Enel Green Power (EGP) Wind Project is a proposed 92 MW project that would be located west of the community of Boulevard and east of the Tierra del Sol Project. Approximately 40 2.3 MW turbines (towers of the proposed wind turbines would be approximately 260 feet tall; as measured from ground level to tip of fully extended blade the total height would be approximately 430 feet) would be constructed on County of San Diego jurisdictional lands (Dudek 2011). As proposed, construction of the project would occur between February and October 2013, and commercial operations are scheduled to begin in November 2013 (Dudek 2011). The preferred point of interconnection for the Jordan Wind Project is SDG&E's rebuilt Boulevard Substation.



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SOURCE: CA Dept. of Conservatio, 2008; SanGIS 2011; AECOM 2012; Soitec 2012

FIGURE 19

Cumulative Projects Map

VISUAL RESOURCE AND AESTHETICS REPORT - TIERRA DEL SOL SOLAR FARM

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Based on the graphic depiction of the proposed EGP Wind Project as indicated on Figure 19, turbines within the southern portion of the project site could be located within the cumulative impact area. An environmental impact report for the project has not been prepared at this time however, similar to the Proposed Project, the EGP Wind Project would add industrial project components to the primarily natural setting and rural character of the Tierra del Sol community and the introduction of large-scale wind turbine would impact the existing quality and character of the area. The vertical form, smooth texture, and striking white color of wind turbines would contrast with the low rugged form, rough texture and green tinged color of existing vegetation in the surrounding area that could result in adverse significant visual impacts.

Additional Considerations

As discussed previously, several prominent transmission and renewable energy projects in various stages of development have been identified in the region along the Interstate 8 corridor but are not considered in the analysis below because they are located outside of the cumulative impact area. Although not considered in this report, construction and operation of these projects would alter existing views from the corridor and would affect the existing visual quality and character of the region.

Cumulative Impact Analysis

As noted in Sections 6.2 and 6.5 of this report, the project site and surrounding area presents a primarily natural appearance and rural character however, the existing visual quality of the viewshed has been altered by existing high voltage transmission lines, low voltage distribution lines, paved and unpaved roads, a scarcely used railway, rural and semi-rural development, and the international border fence. With implementation of the Proposed Project, the visual quality of the viewshed would be further affected and the existing character of the area would take on an increasingly industrial appearance. The addition of over 2,000 tall, smooth textured, light-colored CPV trackers and associated facilities to the primarily natural project setting would contrast with the natural features of the area including the lines, textures, colors, and forms associated with a gently rolling landscape with chaparral vegetation cover and rock outcrops. The scale of the proposed development would be inharmonious with the surrounding area that is typified by scattered rural residential development situated within chaparral vegetated areas. Some of the visual elements of the Proposed Project would significantly affect visual quality based on established County thresholds.

As discussed above, the EGP Wind Project would share similar characteristics as the proposed project as it relates to contrast with the existing natural setting of the area and portions of these projects could be located in the project viewshed. Although they would be

of greater bulk and scale, the EGP Wind Project would include the addition of tall, vertical forms, bold lines, contrasting color, and smooth textures to the landscape setting and would exhibit a similar industrial character. Because the proposed project, in conjunction with proposed prominent wind projects in the immediate vicinity of the project site, would entail large-scale industrial development that would profoundly alter the existing rural character of the Tierra del Sol community, a significant and unavoidable cumulative impact associated with visual resources would occur.

Short Term

While it is unlikely that construction activities associated with the EGP Wind Project would occur concurrently (these projects and the Proposed Project are at different levels of planning and design), project delays and the typical duration of construction activities normally associated with renewable energy projects (up to and routinely exceeding 12 months) warrant the consideration of cumulative short-term impacts to visual resources in this analysis. Construction activities of the two projects could be cumulatively visible in the viewshed, however, the local topography of the area would obscure full views of these sites from the Project and only portions of the EGP Wind project sites would be visible. The full extent of short-term visual impacts occurring on these renewable energy project sites would not be visible from the project site, however, given the primarily natural appearance of the project setting, the Project would contribute to a significant and unavoidable cumulative impact.

Long Term

In addition to the Proposed Project, the EGP Wind Project represents prominent, large-scale industrial projects that would substantially affect the existing visual character of the area. Once constructed, these projects would alter the existing rural character and would increase the prominence of industrial components in the landscape. As the viewshed would become increasingly industrial, the existing visual quality would be degraded by the addition of highly visible CPV trackers and wind turbines. Visual contrast with existing conditions would increase as the form, line, color, and textures of these project components would contrast with that of existing vegetation, rock outcrops, and topography. Overall, the Project's contribution to the long-term impacts to visual resources would be significant because the Project would trigger a fundamental shift in the existing visual character and quality of the area. Therefore, the project would contribute to a significant and unavoidable cumulative impact.

6.6 Summary of Project Impacts and Significance and Conclusions

Due to the anticipated change between existing and proposed visual quality as well as potential impacts including contrast with the existing visual character of the area, the Project would result in moderately high levels of visual contrast and would result in potentially significant visual impacts as they relates to the existing visual character and quality of the site and surroundings.

As discussed in Section 6.5, Cumulative Impacts, above, the project (in conjunction with proposed prominent wind projects in the immediate vicinity) would entail large-scale industrial development that would profoundly alter the existing rural character of the Tierra del Sol community. Therefore the project would contribute to the larger-scale shift from a rural/semi-rural to industrialized landscape anticipated within the viewshed along the Interstate 8 corridor.

Incorporation of Mitigation Measure M-VIS-1 is intended to to break up the mass and scale of the CPV trackers and block views of project components from critical viewpoints through installation of landscape running the length of Tierra del Sol Road where the road is adjacent to the solar farm site. In addition, introduction of foreground detail including fields of cobble rock or other non-organic materials such as native soil and/or decomposed granite would help to attract viewer attention away from CPV trackers and the ancillary structures located behind the landscaped area. However, complete screening of views from public viewpoints to the proposed solar facility is not possible due to the height of CPV trackers (30 feet above ground surface) and due to the plant density limitation required to achieve wildfire protection standards. To further reduce the severity of anticipated visual contrast, additional mitigation measures were considered but were ultimately determined to be infeasible or ineffective. For example, triangular spacing of CPV trackers in selected areas was considered to reduce the visual effect of CPV rows from Tierra del Sol Road however, such an arrangement was determined to be infeasible and would limit the production capacity of the solar farm development. Triangular spacing would also create shading issues that would be detrimental to a solar farm project. Measures limiting the height of CPV trackers were considered but were determined to be technologically infeasible and would not substantially reduce anticipated impacts to existing visual character and quality of the site. Also, minor site grading in select locations on the project site to reduce the stature of individual trackers would do little to reduce the overall visual impact and effects to visual character regarding operation of a solar farm of more than 2,000 trackers. Lastly, altering the location of individual gen-tie structures in the Jewel Valley area may reduce the visual prominence of select structures however, it may also result in greater impacts to cultural and/or biological resources in the area. Therefore, due to limitations of Mitigation Measures M-VIS-1 and the infeasibility or ineffectiveness of additional mitigation measures considered during preparation of this report, it is anticipated that the resulting impacts to visual resources (i.e., impacts to existing visual character and

quality of the site – County of San Diego Visual Resources Guideline 1) would be significant and unmitigable (VIS-1). Project-generated glare impacts would also remain significant and unmitigable (VIS-2) even after implementation of Mitigation Measure M-VIS-1.

Tables 7 and 8 below summarize the visual quality ratings, viewer response, and visual impact ratings at KOPs 1 through 9.

Table 7
Summary of Visual Quality Ratings – Solar Farm

Visual Quality	Key View 1			Key View 2			Key View 3			Key View 4			Key View 5		
	E	*P*	*Change*	*E*	*P*	*Change*	*E*	*P*	*Change*	*E*	*P*	*Change*	*E*	*P*	*Change*
Vividness	2.0	2.8	+0.8	2.0	3.5	+1.5	3.4	4.5	+1.1	3.6	3.0	-0.6	3.9	3.2	-0.7
Intactness	3.0	2.5	-0.5	3.5	1.3	-2.2	3.5	1.2	-2.3	2.4	1.8	-0.6	4.8	3.2	-1.6
Unity	3.5	1.7	-1.8	3.2	1.0	-3.2	3.2	1.4	-1.8	2.2	1.7	-0.5	4.5	2.9	-1.6
Total	**8.5**	**7**	**-1.5**	**9.7**	**5.8**	**-3.9**	**10.1**	**7.1**	**-3**	**8.2**	**6.5**	**-1.7**	**13.2**	**9.3**	**-3.9**

E =existing, P=proposed.
Existing and proposed ratings are based on a scale of 0–5 where 0=none, 3=moderate, and 5=high.

Table 8
Summary of Visual Quality Ratings – Gen-Tie Line

Visual Quality	Key View 6			Key View 7			Key View 8			Key View 9		
	E	*P*	*Change*	*E*	*P*	*Change*	*E*	*P*	*Change*	*E*	*P*	*Change*
Vividness	3.5	2.6	-0.9	3.2	2.5	-0.7	3.7	3.4	-0.3	4.0	3.2	-1.0
Intactness	4.1	2.4	-1.7	3.6	2.3	-1.3	3.8	3.3	-0.5	4.2	3.0	-1.2
Unity	3.8	2.5	-1.3	3.8	2.7	-1.1	3.5	3.0	-0.5	4.1	2.9	-1.2
Total	**11.8**	**7.5**	**-3.3**	**10.6**	**7.5**	**-3.1**	**11**	**9.7**	**-1.3**	**12.3**	**9.0**	**-3.2**

Note: While not included in Table 8, the total visual change "score" anticipated at Key View 10 (with consideration given to existing landscape and proposed project scenario) would be -3.7.

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7.0 VISUAL MITIGATION AND DESIGN CONSIDERATIONS

Mitigation Measure M-VIS-1 addresses both Project design and site management techniques in order to reduce anticipated visual contrast and impacts to existing visual character and/or quality of the site and surroundings to the extent practicable. As stated above, additional mitigation measures to reduce the severity of project impacts associated with existing visual character and/or quality were considered but were ultimately determined to be infeasible or ineffective. Therefore, even with implementation of relevant PDFs and Mitigation Measure M-VIS-1, project impacts associated with Guideline 1 would remain significant and unmitigable (VIS-1).

Mitigation Measures

M-VIS-1 **Create landscape screening/buffering along Tierra del Sol Road.** The applicant shall install landscape screens as specified in the Landscape Screening Design Report for the Soitec Solar Development Program EIR. Features of the solar facility to be screened include the 50-foot-wide fire buffer with 6-foot-tall perimeter fence, concentrated photovoltaic (CPV) solar panels, and other associated features that exceed the height of the fencing installed around the perimeter of the solar facility. The applicant shall also be responsible for continued maintenance of the landscape screens including installation and maintenance of a drip irrigation system and implementation of and consistency with plant installation and maintenance standards identified in the Landscape Screening Design Report. Periodic monitoring and reporting to observe and assess the maintenance regime and implementation of appropriate measures to promote plant survival, growth, overall health and vigor shall also be required. If necessary, adaptive measures shall be implemented in the subsequent spring season to address project deficiencies as they relate to the desired landscape screening effect. Additional details regarding recommended plants and materials for landscape screens, project specific designs, irrigation systems, water demand calculations and maintenance and monitoring activities are included in the Landscape Screening Design Report.

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9.0 REPORT PREPARERS

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ATTACHMENT A

Representative Photos of the Project Site and Surrounding Area

ATTACHMENT A
Representative Photos of the Project Site and Surrounding Area

Photo 1: View north from project site to residential properties, area topography and vegetation

Photo 2: Existing access roads, vegetation, and distribution lines on the project site

Photo 3: Southwest Powerlink 500 kV towers located on the project site along central east-west access road

Photo 4: Border Fence and access road along the southern limits of project site

Photo 5: Existing fencing, access road, and distribution line along the eastern limits of the project site

Photo 6: Dense vegetation across southern half of project site

Photo 7: Confluence of natural and manmade landscape features in the community of Tierra Del Sol from Tierra Del Sol Road

Photo 8: Valley landscape populated with clusters of oak trees and traversed by local electrical infrastructure. View is to the east-northeast across Empire Ranch from Jewel Valley Road.

Photo 9: Juxtaposition of foreground valley ridge landscapes. View is to the southwest from Jewel Valley Road.

Photo 10: Rural residential development, exposed soils and dense to clumped chaparral vegetation. View is to the east from Jewel Valley Road.

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