

SAN BERNARDINO COUNTY INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of Initial Study pursuant to County Guidelines under Ordinance 3040 and Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APN: 0630-351-01,-02,-03,-04,-05,-06,-07, -08,-09, -10,-11,-12,-13,-14,-15

Applicant: Sustainable Power Group LLC

Community: Landers

Location: East of Bowman Trail, south of Herdmans Road, north of Summers Road, and West of Sunny Vista Road

Project No: P201400196

Staff: Tracy Creason

Rep: Sustainable Power Group LLC

Proposal: Conditional Use Permit to establish a 3 megawatt solar photovoltaic generating facility on 35 acres.

USGS Quad: Goat Mountain

Lat/Long: 34°15'34.8"N/116°20'17.5"W

T, R, Section: T2N R6E Sec. 15

Community Plan: Homestead Valley

LUZD: HV/RL-5

Overlays: Biotic Resources

PROJECT CONTACT INFORMATION:

Lead agency: County of San Bernardino
Land Use Services Department
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

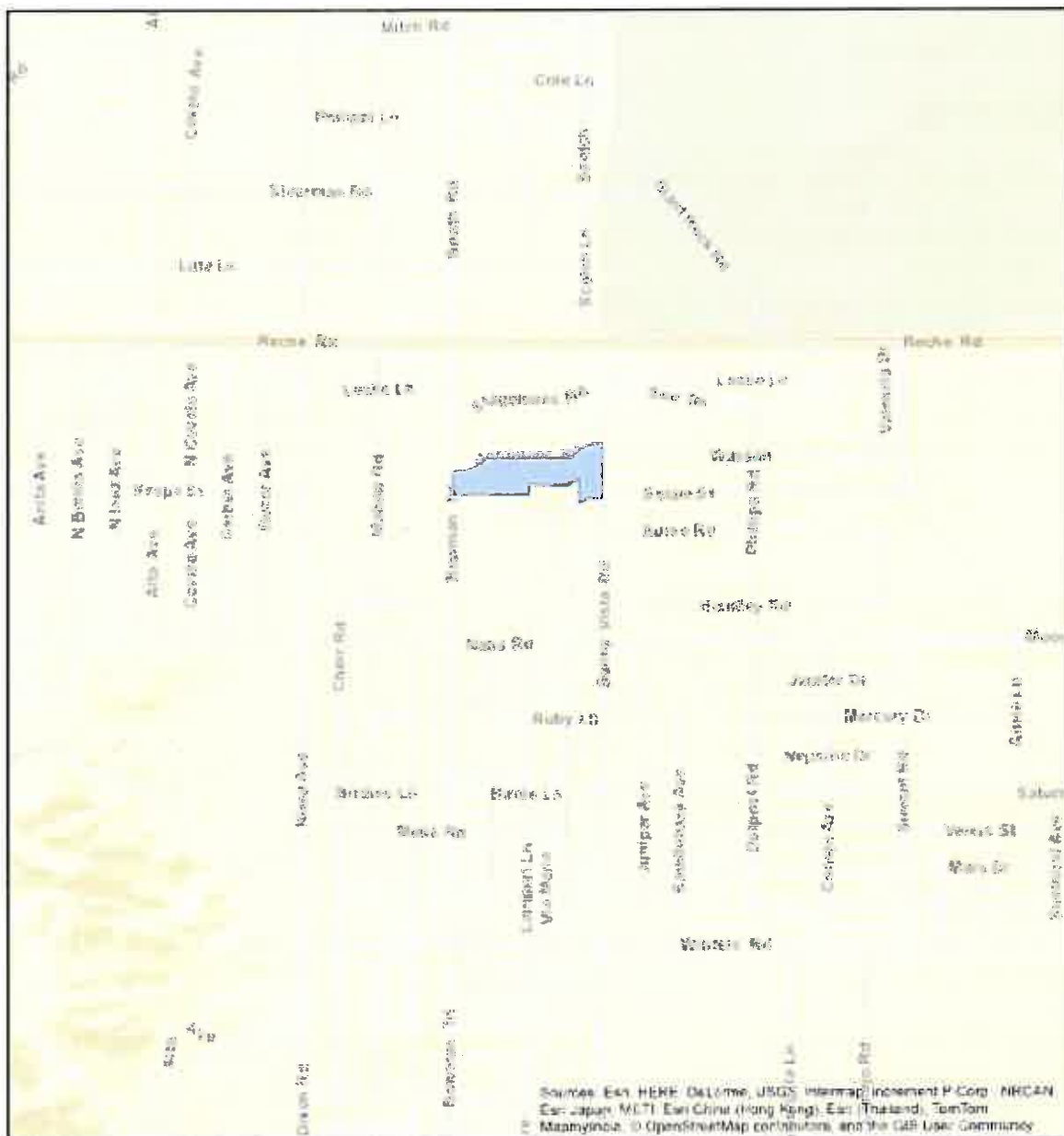
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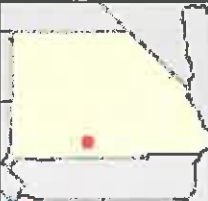




PROJECT DESCRIPTION:

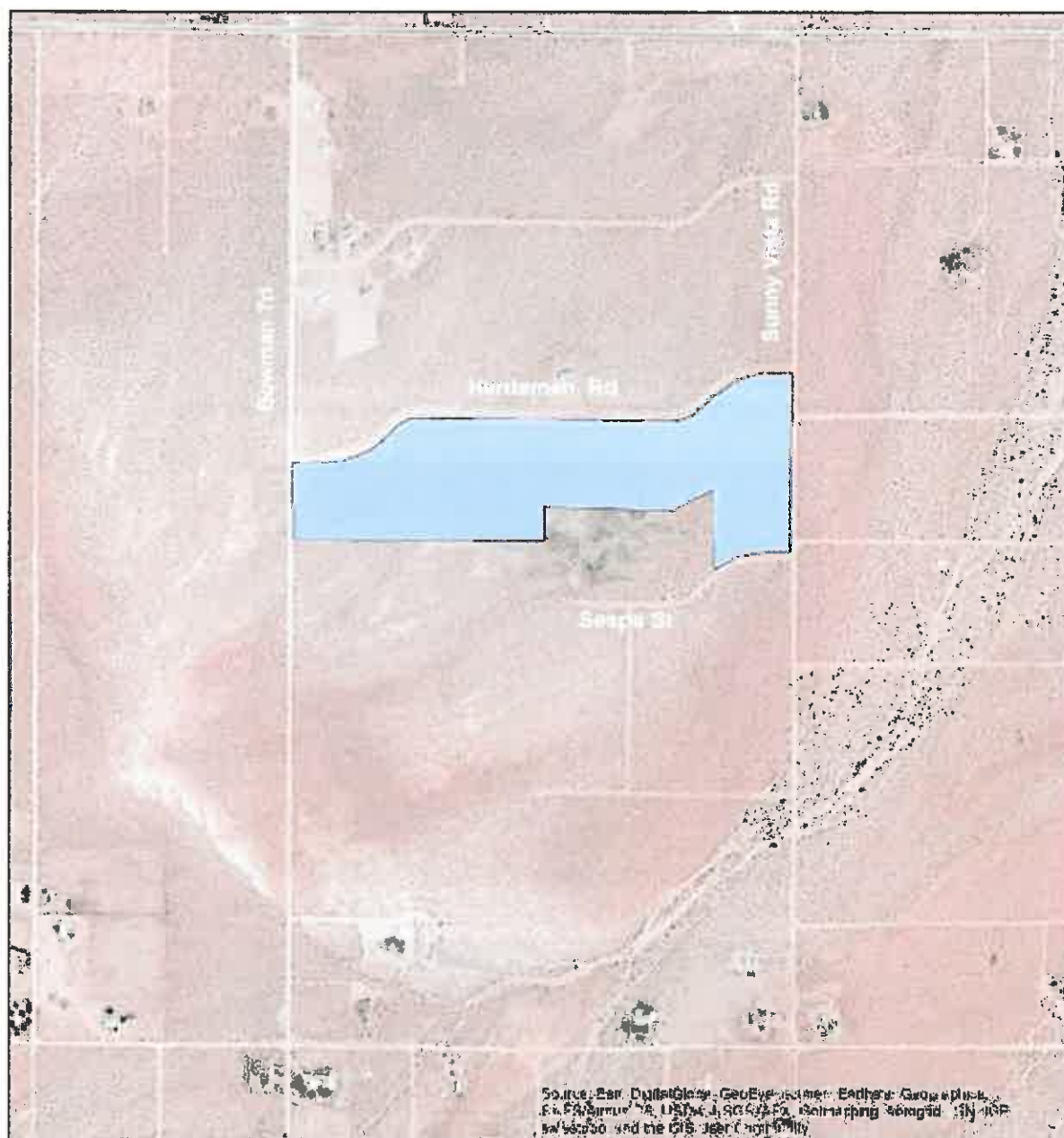
Sustainable Power Group (sPower) LLC (applicant) proposes to construct and operate the Bowman Solar (Project) facility, a 3 megawatt photovoltaic (PV) solar energy generation facility (SGF) on approximately 35 acres. The project site is located west of Sunny Vista Road, south of Herdmans Road, north of Summers Road, and east of Bowman Trail in the Landers community in unincorporated San Bernardino County (County).

The project area is situated within Section 15, Township 2 North, Range 6 East, S.B.B.&M. of the Phelan, CA U.S. Geological Survey 7.5-minute topographic quadrangle at approximately Latitude/Longitude 34°15'34.8"N/116°20'17.5"W (See **Figures 1 and 2**). Project site and surrounding area photographs are provided in **Figure 3**.

FIGURE 1: Vicinity Map



San Bernardino County		Map Details		Map Description	
		 Project Site	The project site is located on privately owned land in San Bernardino County, California.		Drawn By: SL
		Figure 1: Vicinity Map			Date: 7/7/14
					
				Revision Date:	
		 S. POWER <small>AN AMERICAN POWER GROUP COMPANY</small>		BOWMAN SOLAR	









San Bernardino County	Map Details	Map Description	
	  Project Site 	The project site is located on privately owned land in San Bernardino County, California.	Drawn By: SL Date: 7/7/14 Revised By: Revision Date:
		 S-POWER <small>SUSTAINABLE ENERGY CORP.</small>	BOWMAN SOLAR

FIGURE 3: Site Photographs



View south across project site from Herdmans Road



View west across project site from Sunny Vista Road



View east across project site from Bowman Trail Road

PROJECT SETTING

Regional Setting

The project site is located in the Mojave Desert region of San Bernardino County. The Mojave Desert comprises the County's Desert Planning Region, which contains 93 percent of San Bernardino County's land area. The Desert Planning Region consists of an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. The local area of the project is the unincorporated community of Landers. Land uses in this area consist primarily of vacant land interspersed with rural residential development. Other uses include small-scale commercial development, support services such as schools, and other public facilities.

Major transportation routes in the region include:

- State Route (SR) 247. This roadway, generally running northwest to southeast, is located 5.6 miles west of the project site. Nearest the project site, it is a paved, two-lane undivided highway. Paved shoulders are present, but there are no sidewalks, curbs, or streetlights. The roadway is identified in the General Plan's Circulation and Transportation map as a Major Highway; this roadway classification is defined by the Development Code as a four-lane roadway with a minimum right-of-way (ROW) of 104 feet.
- Reche Road. This east-west roadway runs 0.4 miles north of the site. Nearest the project site, it is a paved, two-lane undivided highway. There are no sidewalks, curbs, or streetlights. The roadway is identified in the General Plan's Circulation and Transportation map as a Major Highway; this roadway classification is defined by the Development Code as a four-lane roadway with a minimum ROW of 104 feet.

The nearest freeway to the project site is Interstate 10, located 27 miles to the southwest. In addition to major roadways, the region contains numerous paved and unpaved local streets providing access to individual parcels.

There are no airports in the project vicinity. Twentynine Palms Airport, a public use airport, is located about 24 miles to the southeast and Landers Airport, a private airstrip, is located approximately 3.25 miles to the northwest of the project site.

Local Setting

The area immediately surrounding the project site primarily consists of vacant land with desert vegetation intermingled with rural residential development. A total of seven single-family residences are located within 1,000 feet of the project parcel. One residence is a model home which has not been occupied.

Roadways in the project vicinity are unimproved. Bowman Trail, running along the western edge of the site, provides access to Reche Road 0.4 miles north of the site, the nearest paved roadway. Reche Road is designated in the Homestead Valley Community Plan Circulation Map as a Major Highway, and provides a connection to SR-247. There are no designated

bicycle facilities in the project vicinity. San Bernardino Associated Governments long-range planning shows no such facilities planned or proposed in the area.

Public transportation services in the project vicinity are limited. The Morongo Basin Transit Authority operates service in the area. The nearest service point to the project site is located approximately 3.3 miles to the west, at the corner of Reche Road and Landers Lane. Such service provides access to regional destinations such as Landers, Joshua Tree, and Twentynine Palms.

The project site is located within the Morongo Unified School District. Local schools serving the site include Landers Elementary School, as well as several middle and high schools located to the south near the communities of Joshua Tree and Yucca Valley.

Fire protection for the project site is provided by Division 5 of the San Bernardino County Fire Department (SBCFD). The nearest fire station is Homestead Valley/Landers Station 19, located approximately 6.4 miles to the northwest of the project site. This station houses one Type III Engine Company and one Brush Patrol. Yucca Valley Station 42, located approximately 8 miles south of the project site, houses one Type I Engine Company, one Water Tender, one modular ambulance, two reserve engines, and two reserve ambulances.

Police protection for the project site is provided by the San Bernardino County Sheriff-Coroner Department. The Morongo Basin Station, located approximately 9.25 miles southeast of the project site, serves local area. The nearest medical facilities to the project site are Avalon Urgent Care Center, located approximately 9.1 miles to the southwest.

The project site is located within the jurisdiction of the Bighorn-Desert View Water Agency. The Agency provides water service to 1,450 active residential customers in a 44-square-mile service area. No sewer services are available in the project vicinity. All local properties use septic systems.

Existing Site Land Uses and Conditions

The site comprises approximately 35 acres. There are no structures on the project site. Dirt roads provide access to the project site from Reche Road. Human disturbance is evident in the form of mechanical disturbance of soil, vegetation removal, off road vehicle tracks, presence of dirt roads on some parts of the site, trash deposition, and limited improvements including installation of electrical and water utility service in the general vicinity of the project site.

County special districts (CSA 70 R-15) maintained dirt roads within dedicated rights-of-way are present along the northern (Herdmans Road) eastern (Sunny Vista Road), and western (Bowman Trail) edges of the site. These streets do not have curbs, sidewalks, or street lighting. Additional dedication of ROWs are required for compliance with the most recent County standards.

The site slopes at approximately 2 percent downward to the northeast, with an elevation change of about 50-60 feet (from 2,930 feet to 2,920 feet) over a distance of 0.1 mile. The soil type underlying the project site consists of Cajon sands. Cajon sand is generally very deep, somewhat excessively drained soil composed of coarse grained silty sand with pebbles found on alluvial fans and river terraces. Plant communities and land cover types in the project area

are predominantly a combination of Creosote Bush Scrub and Developed/Disturbed Lands. No drainages were observed on the project site.

According to data from the California Department of Conservation's Farmland Mapping and Monitoring Program, the project site is not within the survey boundary and is therefore not designated as Important Farmland. The project site is not protected by Williamson Act or Farmland Security Zone contracts.

The applicable Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (unprinted panel No. 06071C7425H) indicates the site is unidentified, meaning flood hazards for the area have not been determined. The County General Plan Land Use Plan's Hazard Overlays Map does not indicate the site to be located within zones FP1-FP3.

SBCFD mapping indicates the site is located in a non-very high fire hazard severity zone.

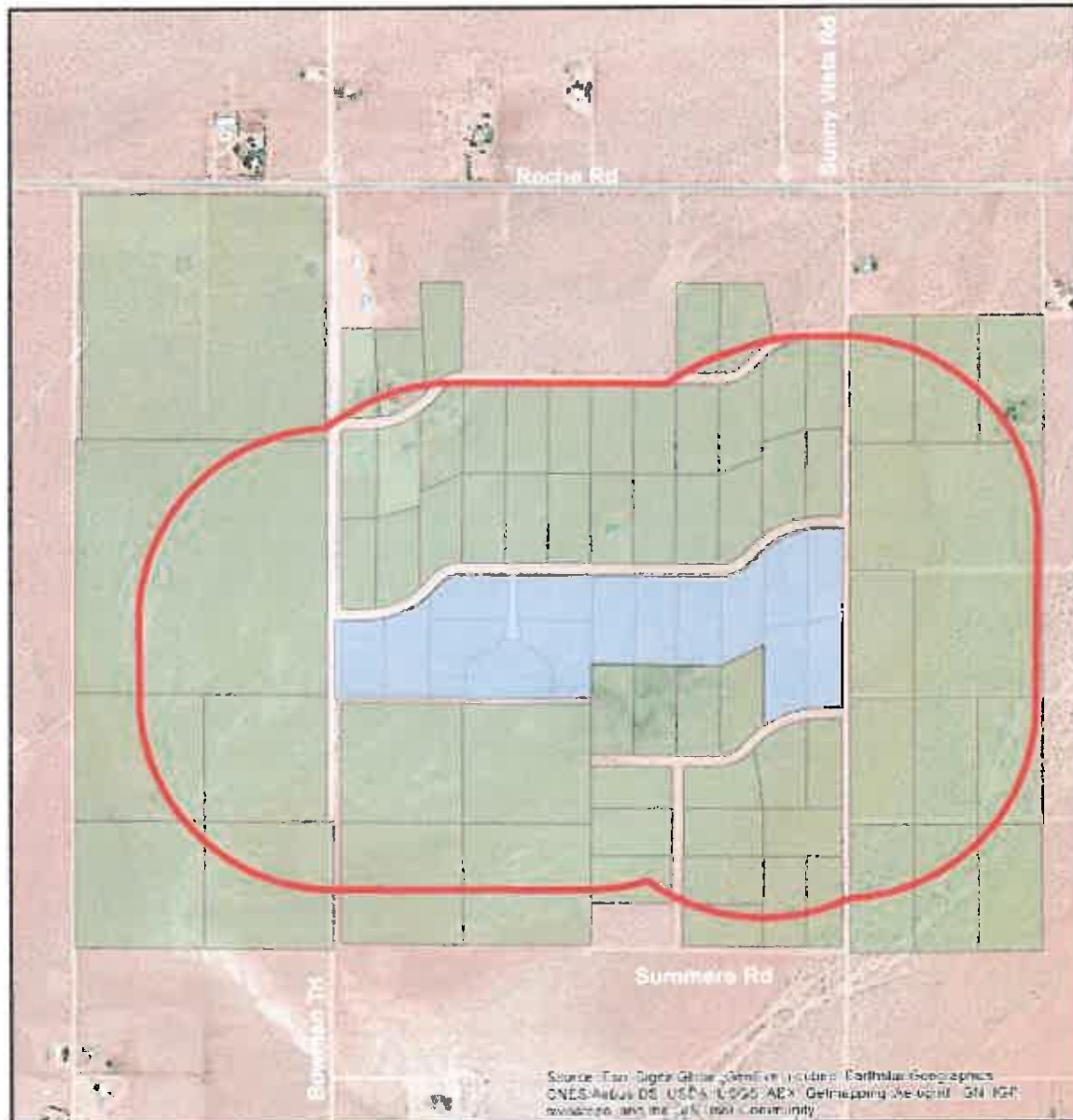
Existing General Plan Land Use Zoning Designations

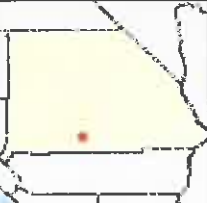

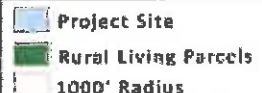


Land uses on the project site and surrounding parcels are governed by the San Bernardino County General Plan, and allow for the establishment of focused goals, policies, and land uses for distinct regions of the County. The site's land use zoning designation is HV/RL-5 (Homestead Valley Community Plan/Rural Living – 5 acre minimum parcel size). The County Board of Supervisors recently approved a Development Code Amendment confirming that solar power plants are conditionally permitted within the RL zone. This Code Amendment took effect in January 2014.

As shown in **Table 1** and **Figure 4**, parcels surrounding the project site are within the HV/RL-5 district. The RL-5 district is primarily intended for residential land use development, and also conditionally permits commercial solar power generation.

Table 1: Existing Land Use and Land Use Zoning Districts		
Location	Existing Land Use	Land Use Zoning District
Project Site	Vacant land	HV/RL-5 (Homestead Valley Community Plan/Rural Living-5)
North	Rural residential; vacant lands	HV/RL-5 (Homestead Valley Community Plan/Rural Living-5)
South	Vacant lands	HV/RL-5 (Homestead Valley Community Plan/Rural Living-5)
East	Rural residential; vacant lands	HV/RL-5 (Homestead Valley Community Plan/Rural Living-5)
West	Vacant lands	HV/RL-5 (Homestead Valley Community Plan/Rural Living-5)

FIGURE 4: Existing Land Use Zoning Designations



San Bernadino County		Map Details		Map Description		
				The project site is located on privately owned land in San Bernadino County, California.	Drawn By: SL	
		Figure 4: Land Use Designations			Date: 7/7/24	
						Revised By:
						Revision Date:
				BOWMAN SOLAR		

PROJECT OVERVIEW

The proposed Bowman Solar project is a 3-megawatt solar PV electricity generation facility on 35 acres of previously disturbed and vacant land. The SGF will interconnect to an existing Southern California Edison (SCE) 25 kilovolt (kV) distribution line located approximately one-half mile north of the Project Site via an underground line extension. Once constructed, the facility would produce enough electricity to serve over 900 homes. Implementation of the project requires the approval of a Conditional Use Permit (CUP) to permit a renewable energy facility.

Project Objectives

The Applicant's Project objectives are to meet the increasing demand for electricity generated from clean, renewable technology. The proposed SGF would assist California in the effort to meet the established Renewable Energy Portfolio Standards. Senate Bill 14 establishes Renewable Energy Portfolio Standards targets for California that state, "All retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." State government agencies have been directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines. The SGF qualifies as an eligible renewable energy resource as defined by the California Public Resources Code (PRC) and would help the State meet the objective of increasing renewable energy generation.

The project objectives include but are not limited to:

- Develop a solar power generation project that will help California meet its statutory and regulatory goal of increasing renewable power generation.
- Reduce greenhouse gas emissions.
- Locate project facilities in an area that optimizes desirable solar project characteristics with minimum potential for environmental impacts.
- Use disturbed land or land that has been previously degraded from prior use that is in close proximity to existing electrical infrastructure.
- Protect natural and scenic values of the landscape for area residents.
- Use existing electrical distribution facilities, rights-of-way, roads, and other existing infrastructure where possible to minimize the need for new electrical support facilities.
- Minimize impacts to threatened or endangered species or their habitats, wetlands and waters of the United States, cultural resources, and sensitive land use.
- Minimize water use.
- Minimize site grading, excavating and filling activities by being located on land where the existing grade does not exceed an average of five percent across the site.

Overview of Solar Technology

Solar cells, also called PV cells, convert sunlight into electricity. PV gets its name from the process of converting light (photons) to electricity (voltage), which is called the PV effect.

PV cells are located on panels, which may be mounted at a fixed angle facing south or on a tracking device that follows the sun, allowing them to capture the most sunlight. When panels are mounted on tracking devices, they are referred to as trackers or tracker blocks. The combination of solar panels into a single system creates a solar array. For large electric utility or industrial applications, hundreds of solar arrays are interconnected to form a large, utility-scale PV system.

PROJECT FEATURES

Major project features would include the following (see Figure 5):

Solar PV Generation Facility

The SGF would be designed for optimum performance and ease of maintenance. A series of PV module arrays would be mounted on racking systems typically supported by a pile-driven foundation design. The foundation design would be determined based on a full geotechnical survey. The module mounting system or racking system would be a fixed-tilt or tracker PV array configuration oriented to maximize the amount of incident solar radiation absorbed over the course of the year.

Electrical connections from a series of PV arrays would be channeled to combiner boxes located throughout the solar field. Electrical current would be collected and combined prior to feeding the inverters. The solar field would be laid out in a common PV block design to allow adequate clearance or access roads and adequate access for maintenance.

Inverters would be consolidated in areas to minimize cable routing, trenching, and minimal electrical losses. The alternating current (AC) out from the inverters would be routed through an AC collection system and consolidated within system switchgear. The final output from the SGF would be processed through a transformer to match the interconnection voltage. Electrical safety and protection systems would be provided to meet utility, California Independent System Operator, and regulatory codes and standards. The energy would be delivered to the SCE transmission network.

A security perimeter fence with appropriate signage for public protection would be installed. Points of ingress/egress would be accessed by locked gates for facility services and maintenance, as required.

Additional information for specific elements of the SGF is provided in the following sections.

Photovoltaic Modules

The actual total number of PV modules would depend on the technology selected, optimization evaluation, and detailed design. The market conditions, economic considerations, and environmental factors would be taken into account during the detailed design process. The following PV module technology are planned to be incorporated into the SGF:

- PV crystalline silicon technology
- Tracking module configuration

Traditional PV crystalline solar cells are made from silicon, are usually flat-plate, and are generally the most efficient. For the tracking configuration, the modules would rotate from east to west over the course of the day. Modules will be non-reflective and highly absorptive.

The amount of the sun's heat absorbed by a solar panel is similar to the amount of the sun's heat absorbed by the earth. On the other hand, solar panels store less heat than the earth. A solar panel is thin – the glass is approximately 3 millimeters (0.12 inches) in thickness – lightweight, and surrounded by airflow (because it's mounted above the ground). Therefore, heat dissipates quickly from a solar panel. The normal operating condition temperature for solar panels would be 20 degrees Celsius (°C) or 68 degrees Fahrenheit (°F) above ambient temperature, and so a typical summer day at 40°C (104°F) results in panel temperatures of approximately 60°C (140°F). When accounting for irradiance, wind, and module type, it is expected that the peak module temperatures in the summer would be between 65°C and 70°C (149 and 158°F) and the peak module temperatures in the winter would be between 35°C and 40°C (95 and 104°F). Although the panels would be hot to the touch, they would not noticeably affect the temperature of the surrounding area; temperatures below the trackers would be nearly the same as ambient temperatures in the ordinary shade.

Standard Installation, Array Assembly, and Racking

There are a variety of module mounting systems from various manufacturers that are available in the solar industry. The majority can be mounted on a variety of foundations. Fixed-tilt, single-axis trackers, and dual-axis trackers provide various levels of energy efficiencies. These systems are under consideration for the proposed SGF. The final system design would be determined by using optimization evaluations and economic assessments.

The module mounting system provides the structure that supports the PV module arrays. The foundations are typically cylindrical steel pipes/piles driven into the soil using pneumatic techniques, similar to hydraulic pile driving. The final foundation design would be determined based on the geotechnical survey for the Project location. Once the foundation has been installed, the module racking system would be installed to support the PV modules. For a tracking configuration, motors would be installed to drive the tracking mechanism.

The module mounting system would be oriented in north-south rows within a PV design block. The module configuration will be generally similar in height and width but separated by internal access roads and inverter stations throughout the site.

Direct Current (DC) Collection, Inverters, AC Collection, and Transformers

Modules would be electrically connected into strings. Each string would be funneled by electrical conduit underground to combiner boxes located throughout the solar field power blocks. The output power cables from the combiner boxes would again be consolidated and feed the DC electricity to inverters which convert the DC to AC.

Underground electrical cables would be installed using ordinary trenching techniques. Trenching is expected to be relatively shallow. All construction activity (trenching, electrical routing, backfilling, and compaction) would be conducted in accordance with local, State, and federal codes.

System transformers would step up the AC power to the appropriate interconnection voltage. As required, switchgear cabinetry would be provided where necessary for circuit control.

All electrical inverters, transformers, and gear would be placed on concrete foundation structures. The SGF, including inverter equipment, would be designed and laid out in megawatt increments/blocks.

Each inverter would be fully enclosed, pad mounted, and stand approximately 90 inches in height. The AC output of two inverters would be fed via underground cable into the low-voltage side of the inverter step-up transformer, generally within 20 feet of the inverters.

Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. All electrical equipment, inverters, collector systems and PV array systems would be tested prior to commencement of commercial operations.

SGF Switchgear

Structural components in the switchgear area would include:

- Transformers, switchgear, and safety systems

The transformer, approximately 87 inches in height, would be pad mounted and enclosed together with switchgear and a junction box. The high-voltage output of the transformer would be combined in series via underground collector cable to the junction box of the transformer in closest proximity. Distances can range from 60 feet to 700 feet throughout the Project site. The collector system cables would be tied at underground junction boxes to the main underground collector cables, composed of a larger gauge wire, to the location of the generator step-up transformer (GSU). The main collector cables would rise into the low-voltage busbar and protection equipment that is enclosed together with the GSU. The primary switchgear includes the main circuit breaker and utility metering equipment, and would be enclosed separately and pad mounted together with the GSU. Both the GSU and the primary switchgear stand approximately 87 inches in height. The output of the switchgear would be the start of the generation-tie line (gen-tie).

Data Collection System

The SGF would be designed with a comprehensive Supervisory Control and Data Acquisition (SCADA) system for remote monitoring of facility operation and/or remote control of critical components. Within the site, the fiber optic or other cabling required for the monitoring system would be installed throughout the solar field leading to a centrally located (or series of appropriately located) SCADA system cabinets. The telecommunications connections to the SCADA system cabinets are either wireless or hard wired.

The system would also include a meteorological data collection system. The meteorological station would have the following weather sensors: a pyranometer for measuring solar irradiance, a thermometer to measure air temperature, a barometric pressure sensor to measure atmospheric pressure, and two wind sensors to measure speed and direction. These

sensors would be connected to a data logger to compile the data for transmission to the Data Collection Center.

SGF Interconnection Plan and Gen-Tie Lines

The Project will interconnect to SCE's existing Landers 25 kV distribution line, near the intersection of Bowman Trail and Reche Road, via a 0.4 mile gen-tie placed either overhead or underground in the public ROW along either the east or west side of Bowman Trail. The required interconnection facilities and 25 kV switchgear and system upgrades are as follows:

- 25 kV line extension of approximately 0.4 miles, including both overhead and underground conductor
- 5-way gas switch
- Riser pole(s)
- Switch automation
- 25 kv metering, transformers, and associated wiring/conductors
- Remote terminal unit
- Telecommunication system for remote terminal unit
- Pole mounted 25 kV remote automatic recloser switch directly below cross-member on pole mounted lines (approximately 2 feet in height, 4 feet in width, and 2.5 feet in depth)
- Reprogram bi-directional transducer

All power poles will be less than or equal to existing electrical and telecom poles in the area and will range between 30 to 45 feet. The 25kV wiring/conductors will be located near the top of the poles and the remote automatic recloser switch will be mounted on wooden or a metal cross-member approximately 2 to 3 feet beneath the 25kV wiring/conductors. All infrastructure will be undergrounded wherever possible. Additional facilities may be required along Reche Road including upgrades to existing infrastructure or the installation of new conductors and poles along Reche Road.

Telecommunication

Telecommunication services are expected to be provided to the Project site via wireless technology or through an extension to existing telecommunication infrastructure north of the Project site. Communication lines would run in the public ROW and would likely be undergrounded to the project entrance.

Perimeter Fencing and Access Roads

Eight-foot-tall chain link fencing is proposed along the perimeter of the project site, set back fifteen feet from the ROW per County code. Access gates would be provided at the site's entry from Bowman Trail.

Bowman Trail would be the primary project access road during construction and operations and will be paved per San Bernardino County standards. A 26-foot-wide perimeter access

road would be constructed internally along the project project's fence line and all other interior access routes would be a minimum of 20 feet in width. Access roads within the site would meet the minimum 85% compaction required, would not exceed 8% slope, and consist of gravel, an aggregate base, or native materials with a soil stabilization material, if necessary.

Lighting

Very limited lighting is proposed on the project site. Manually controlled lights would be installed at equipment pads and motion controlled security lighting would be installed at the Project gate. All lighting will shielded and downward facing so that no light is directed upward. Lighting will be designed to prevent light trespass from the project site to surrounding properties.

Stormwater Facilities

The project is anticipated to have very limited impact on stormwater runoff across the site. Cajon soils identified at the Project site have large percentages of gravel and sand which promote rapid infiltration and generate minimal runoff. Water runoff that is generated at the Project would be permitted to continue as sheet flow across the Project site towards the north and northeast. The project will implement "Best Practices" during all construction phases of the Project. A Storm Water Pollution Prevention Plan incorporating best management practices for erosion control would be prepared and approved before the start of construction. The Project would also comply with applicable post-construction water quality standards adopted by the Regional Water Quality Control Board (RWQCB) or the State Water Resources Control Board.

Dust Control

To prevent windblown sediment and erosion of Cajon soils at the project site, best management practices will be utilized to control dust generation. All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The Project will maintain the wind fencing as needed to keep it intact and remove windblown dropout. Additionally, when vegetation is removed or soils are disrupted, dust control measures including watering of the disturbed area, revegetation, or mulching will be used to suppress dust and prevent erosion of Project soils.

Other Infrastructure

Because the project site would not house any permanent employees, no onsite restroom facilities are proposed. Therefore, no wastewater would be produced and no septic system or other disposal facility would be required.

No water service is proposed at the site. Approximately 12 acre-feet of water is required during construction and would be obtained from Bighorn Desert View Water Agency. Water requirements during operations would be approximately 0.35 acre-feet per year (i.e., for occasional cleaning of solar panels) and would be trucked to the site as needed. Since water consumption during construction is highly dependent on climatic conditions, the Project has applied a safety factor of 1.5 to expected water requirements and applied for a water contract in excess of the required water usage at the site. The Bighorn Desert View Water Agency has

generated a draft contract for board approval and a will serve letter will be generated prior to construction.

BEST MANAGEMENT PRACTICES/PROJECT DESIGN FEATURES

Various attributes and features of the project serve to minimize negative impacts on local land uses. These include:

Construction Process

Disruption to the community is minimized through placement of the site access point at the northwestern edge of the site, on Bowman Trail. This allows construction traffic to efficiently reach the nearest major roadway, Reche Road, 0.4 mile to the north. Construction hours will be from 7 a.m. to 7 p.m., excluding Sundays and Federal holidays.

Residential Buffers

The project is located to create buffers from nearby residences with setbacks significantly larger than required. Perimeter access roads 26 feet in width also serve to increase buffers between project equipment and structures on neighboring parcels.

Solar Technology – Glare and Lighting

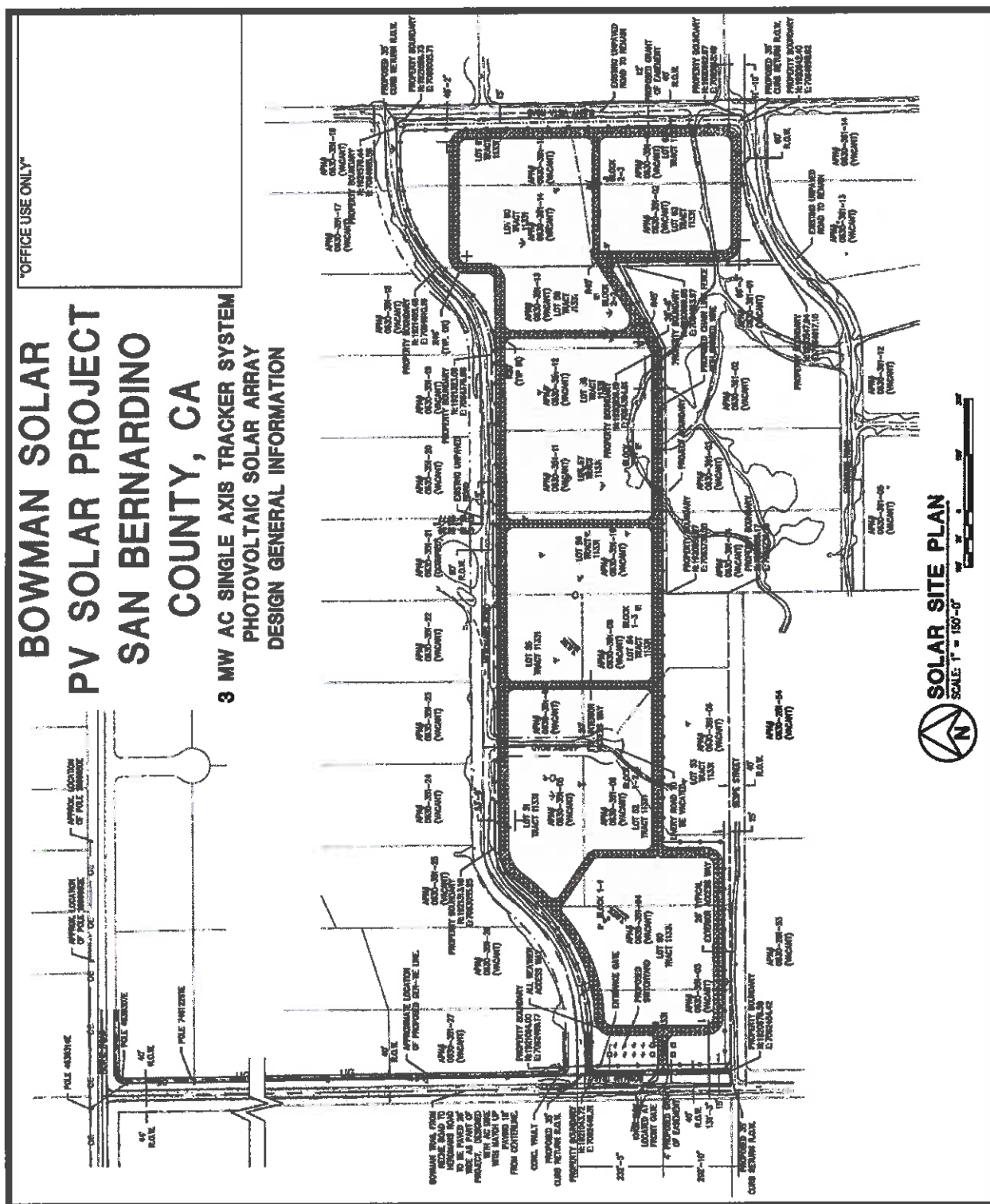
The project uses solar panels that have a low profile (typically 6 feet, generally no more than 12 feet in height due to undulations in the terrain) to minimize visual impacts. These solar panels are made to maximize solar absorption and minimize glare.

Nighttime lighting impacts are minimized by including only small lighting features, equipped with on/off switches or motion detectors. Lighting will be designed to prevent light trespass from the project site to surrounding properties.

Noise Reduction

The primary noise-producing project feature—the inverters—are placed away from site boundaries to ensure off-site areas do not experience noise levels exceeding County standards. Noise generated by trackers is typically between 30-40 decibels, lower than typical ambient levels in the desert, and is not be perceptible outside of the project site.

FIGURE 5: Site Plan



PROJECT CONSTRUCTION

Project construction would consist of two major phases: (1) site preparation; (2) PV system installation. sPower is committed to implementing “Best Practices” during all construction phases of the Project. A Storm Water Pollution Prevention Plan incorporating best management practices for erosion control would be prepared and approved before the start of construction. The Project would also comply with applicable post-construction water quality standards adopted by the RWQCB or the State Water Resources Control Board. Construction of the Project, beginning with site preparation and grading, if required, through equipment set up and commencement of commercial operation, is expected to last approximately 4.5 months.

sPower anticipates close collaboration with the County of San Bernardino and all other associated agencies involved in the California Environmental Quality Act (CEQA) process to identify and manage any environmental conditions specific to the Project. Through the CEQA process, we expect to implement all necessary and appropriate measures. Best management practices for erosion control would be prepared and approved before the start of construction.

Construction Phasing

Construction of the project site is expected to occur in two phases over about 4.5 months. Phase 1 involves site preparation and Phase 2 includes PV system installation. Phase durations, equipment, and staffing are further described in **Table 2** and the following sections.

Table 2: Construction Phasing				
Phase		Duration	Equipment	Staffing
1	Site Preparation	1.5 months	Grader Dozer Tractors/Loaders/Backhoes (2) Water Truck	26
2	PV System Installation	3 months	Trenchers (3) Welders (3) Forklift, rough-terrain (3) Generator set Tractors/Loaders/Backhoes (2)	40
<i>Total</i>		<i>4.5 months</i>		

Site Preparation

Construction of the PV facility would begin with initial clearing and grading (if required) of the staging areas. Access to the Project site would be improved to appropriate construction standards. The staging areas would typically include construction offices, a first aid station and other temporary buildings, worker parking, truck loading and unloading facilities, and an area for assembly. Road corridors would be surveyed, cleared, and graded to bring equipment, materials, and workers to the areas under construction. Buried electrical lines, PV array locations, and the locations of other facilities may be flagged and staked to guide construction activities. The Project site would be fenced with a security fence. The fenced area would include at least two gates. A secured controlled main access gate would be located at the entrance.

Best management practices for erosion control during site preparation, initial erosion and sedimentation controls would be installed. In addition, water truck reloading stations (as required) would be established for dust control.

PV System Installation

PV system installation would include earthwork, minimal grading, and erosion control, as well as construction of the plant substation and erection of the PV modules, supports, and associated electrical equipment. System installation would begin with teams installing the mounting and steel/concrete piers support structures. The exact design would be finalized pending specific soil conditions. The methods may include (but are not limited to) vibration driven screw piles or above-ground ballast foundations. This would be followed by panel installation and electrical work.

Concrete would be required for the footings, foundations, and pads for the transformers, and substation equipment. Concrete would be produced at an off-site location by a local provider and transported to the Project site by truck. The enclosures housing the inverters would have a pre-cast concrete base. Final concrete specifications would be determined during detailed design engineering and would meet applicable building codes.

The PV modules require a moderately flat surface for installation. Some earthwork, including minimal grading, fill, compaction, and erosion control cultivation may be required to accommodate the placement of PV arrays, foundations or footings, and access roads. Control of erosion during construction may include the use of silt fencing, straw bales and temporary catch basins, inlet filters, and truck tire muck shakers. Construction of the PV arrays would include installation of support beams, module rail assemblies, PV modules, inverters, transformers, and buried electrical cables.

Wastes that would be generated during construction may contain any of the following: cardboard, wood pallets, copper wire, scrap steel, common trash, and wood wire spools. sPower does not expect to generate hazardous waste during construction of the proposed Project. However, field equipment used during construction would contain various hazardous materials such as hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, and other petroleum-based products contained in construction vehicles.

Approximately 12 acre-feet of water would be required during construction, with actual consumption strongly dependent upon climatic conditions. Construction water would be trucked to the site and water needs would be limited to soil conditioning and dust suppression. Potable water would be brought to the Project site for drinking and domestic needs.

OPERATIONS

The project facilities would be automated to allow for operation without staff being present. By nature, solar power generation projects operate during daylight hours, 365 days per year. Staff would visit the site to provide maintenance services and ensure proper operation. Maintenance staff and security personnel would visit the site every one to two days. Activities would be monitored remotely by staff at an offsite location.

Washing of the solar panels, which may be necessary to maintain panel efficiency, would occur approximately two times per year. Washing would require an increase in temporary staffing onsite and the use of water trucks. Trucks would obtain a supply of water from offsite sources. Less than 1 acre-foot of water would be required per year for panel cleaning activities. A portion of the water used in cleaning would evaporate into the atmosphere; the remainder would remain on the site and percolate underground. Negligible amounts of water used in panel washing would flow offsite.

Decommissioning

At the end of the Project life all facilities and infrastructure could be removed from the Project site and the land could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, State and County of San Bernardino regulations including the requirements of San Bernardino County Development Code Section 84.29.060. A collection and recycling program would be executed to dispose of the site materials.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- Mojave Desert Air Quality Management District (MDAQMD)
- Lahonton Region, RWQCB

EVALUATION FORMAT

This initial study is prepared in compliance with the CEQA pursuant to PRC Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. This format of the study is presented as follows. The project is evaluated based on its effect on 18 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact
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Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. **No Impact:** No impacts are identified or anticipated and no mitigation measures are required.
2. **Less than Significant Impact:** No significant adverse impacts are identified or anticipated and no mitigation measures are required.
3. **Less than Significant Impact with Mitigation Incorporated:** Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List of mitigation measures)
4. **Potentially Significant Impact:** Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are (List of the impacts requiring analysis within the EIR).

At the end of the analysis the required mitigation measures are restated and categorized as being either self- monitoring or as requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below will be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use/ Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there shall not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION shall be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature (prepared by Tracy Creason, Senior Planner)

9/30/2014

Date



Signature: (Heidi Duron, Supervising Planner)
Land Use Services Department/Planning Division

10/2/2014

Date

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
I. AESTHETICS - Will the project				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the view-shed of any Scenic Route listed in the General Plan):

- a) **Less than Significant Impact.** General Plan Open Space Element Policy OS 5.1 states that a feature or vista can be considered scenic if it:
- Provides a vista of undisturbed natural areas,
 - Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed, or
 - Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

The site is within the community of Landers, which consists largely of vacant land interspersed with rural residential development. Other land uses include commercial and institutional facilities, paved roadways, and powerlines. The site is not part of a vista of natural areas, as surrounding areas are generally flat and intervening landscapes and manmade structures limit views. More distant vistas from higher-elevation areas in the San Bernardino National Forest (located to the west), or Joshua Tree National Park (located to the south) are not significantly impacted due to the Project's surrounding topography, the low height of the proposed solar panels, and other project features. As such, views of undisturbed natural areas are not significantly affected by the project.

The project site is vacant and mostly flat, with no landforms of note. Therefore, there are no unique or unusual features on the site that could comprise an important or dominant position in the viewshed.

Finally, the site does not offer distant vistas that provide relief from less attractive nearby features. The proposed project would directly alter the existing view of the project site from adjacent uses and roadways by developing 35 acres of vacant land with solar panels and ancillary equipment. However, the site is flat and contains no significant geological or vegetation features that could be considered scenic. The solar equipment on site, consisting of solar panels and associated electrical equipment, would maintain a low profile

– approximately 6-12 feet in height. Other project features would include access drives, chain link fencing, and a power distribution line. None of the proposed onsite equipment would obstruct any viewsheds in the area; offsite distribution lines would be consistent in height and design with existing power distribution lines adjacent to area roadways, and would therefore not cause any significant change in views.

For the reasons described above, impacts related to a substantial adverse effect on a scenic vista are less than significant.

- b) **Less than Significant Impact.** The proposed project would not damage scenic resources, including those within a designated scenic highway. There are no State-designated scenic routes in the project vicinity and there are no scenic or historic resources onsite. Although undeveloped, there are no large trees onsite. The vegetation on the site and along the perimeter is sparse and is not unique to the immediate area and therefore is not a scenic resource.

SR-247, located 5.6 miles west of the project site, is depicted on the General Plan's Open Space Element Map as a County-designated scenic route. Due to the substantial distance of the site from this roadway, the flat topography of the area, and the low height of project facilities, the project site would not be visible from the highway. Therefore, the project would have a less than significant impact related to substantial damage to scenic resources within a state scenic highway.

- c) **Less than Significant Impact.** Implementation of the proposed project would alter the existing visual character of the project site. Proposed project facilities have heights which are similar to or lower than those of existing development in the Landers area, including single-family residences and powerlines in the area. The proposed project would have a low profile design (with a typical height of up to 12 feet for solar panels) and minimal lighting. The switchgear location near the project entrance will include 30 to 45 feet wooden power poles connected with a 25kV line and a pole mounted remote automatic recloser switch (approximately 2 feet in height, 3-4 feet in width, and 2.5 feet in depth). Revegetation activities would occur around the switchgear. Because of existing and similar development in the area, the facility would not substantially alter or degrade the existing visual character or quality of the site and its surroundings. The current visual character of the project site consists of flat lands surrounded by sparse rural residential development, utility infrastructure and vegetation communities such as Joshua Tree Woodland and Creosote Bush Scrub. There is some evidence of human disturbance on the site, including mechanical disturbance of soil, vegetation removal, off-road vehicle tracks, and trash.

Photographs of typical solar PV power plant facilities are provided in **Figure 6**. While the precise design of panel systems varies by manufacturer and model, and is subject to modification as technologies evolve, these figures provide an accurate indication of the systems that would be used on the project site. Panels and associated onsite equipment would have a profile much lower than that of a single-story building.

This analysis of aesthetics impacts relies in part on visual simulations of the proposed project. The project's viewshed, which extends approximately two miles from the site boundary, includes areas up to 500 feet higher in elevation. However, due to the low profile of site facilities, it is local viewers from nearby residential areas that would be most affected by changes in site aesthetics.

FIGURE 6: Typical Views of Solar Fields



The viewpoints used in the simulations are mapped on page 1 of Appendix A. Page 2 of Appendix A shows the existing and proposed views from Viewpoint Location #1, the intersection of Sunny Vista Road and Stagemans Road. This view, which is typical of views from nearby residences to the northeast of the project, shows solar panels and fencing covering the site. Due to the low height of project facilities, no structures would stand out on the horizon or significantly modify the landscape.

Page 3 of Appendix A shows the existing and proposed views from Viewpoint Location #2, the intersection of Reche Road and Sunny Vista Road. This viewpoint best represents views from driving west along Reche Road and areas to the north and east. Overhead powerlines are present in the existing view. Expanded, wide setbacks are present along the northeastern border of the project. Due to the low height of project facilities, the project results in only a minor visual impact on the horizon from this viewpoint.

Page 4 of Appendix A shows the existing and proposed views from Viewpoint Location #3, the intersection of Reche Road and Bowman Trail. This viewpoint best represents views from driving east along Reche Road and areas to the north and west. The existing view shows improvements including a paved roadway and overhead powerlines. Due to the low height of project facilities, the project results in only a minor visual impact on the horizon from this viewpoint.

Page 5 of Appendix A shows the existing and proposed views from Viewpoint Location #4, approximately 280 feet south of the intersection of Herdmans Road and Bowman Trail. This viewpoint best represents views from homes closest to the project site to the northwest. Due to the low height of project facilities, no structures would stand out on the horizon or significantly modify the landscape.

Overall, the project is largely obscured from view of adjacent residences by natural vegetation common to the area. Such vegetation, even when low in height, reduces the visual impact of relatively short structures such as solar panels. This vegetation screens the project site from view and would result in the project having a less than significant impact on visual character when viewed from local residences. With approval of the CUP, the proposed project would be consistent with the County's zoning requirements and development standards relative to the setbacks and height of the project. The proposed project would not have a substantial adverse effect on the visual character or quality of the site or its surroundings; impacts would be less than significant and no mitigation is required.

- d) **Less than Significant Impact with Mitigation Incorporated.** The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The project uses dark PV solar cells, which would track the sun to maximize solar exposure to the panels.

Regarding nighttime lighting conditions and daytime glare conditions, "light" refers to artificial light emissions, or the degree of brightness, generated by a given source. The Illuminating Engineering Society of North America defines "glare" as the sensation produced by luminance in the visual field that is sufficiently greater than the luminance to which the eye has adapted to cause annoyance, discomfort, or loss of visual performance and visibility.

Lighting

Construction of the proposed project would generally occur during daytime hours, and could occur as late as 7:00 p.m. in order to meet the construction schedule. No overnight construction would occur. In the event that work is performed between dusk and 7:00 p.m., the construction crew would only use the minimum illumination needed to perform the work safely. All lighting would be directed downward and shielded to focus illumination on the desired work areas only, and to prevent light trespass onto adjacent properties. As applicable, work in the solar field areas and on the distribution lines at night would be performed using battery or gas-powered light stands that would be directed to the active work area. Because lighting would be shielded and focused downward and lighting used to illuminate work areas would be turned off by 7:00 p.m., the potential for lighting to adversely impact any residents is minimal. As a result, the project would not be anticipated to adversely impact nighttime views in the project area.

As described under “Project Features,” above, the proposed project would include manually controlled lights at equipment pads. No other lighting is planned. Cutoffs would be employed to prevent light trespass into neighboring properties. If improperly designed or oriented, such lighting may result in light trespass that falls outside the boundaries of the project site. Under particularly adverse conditions, light trespass causes annoyance, discomfort, or loss in visual performance because of its intensity, direction, or source type and visibility.

Impacts resulting from lighting would be minimized through compliance with all development standards, Zoning Ordinance standards, and the goals, policies, and implementation measures of the General Plan. San Bernardino County Ordinance No. 3900 regulates glare, outdoor lighting, and night sky protection. Nighttime lighting associated with the proposed project would be subject to County approval and compliance with San Bernardino County requirements. Lighting would be directed toward the ground and located near the Project entrance and at inverter locations. All lights would be shielded so that there is no upward directed light. In addition, the implementation of Mitigation Measure AES-1 would minimize the potential for light trespass to adversely affect residents and motorists. With implementation of the standard conditions discussed above, as well as Mitigation Measure AES-1, the project would not have substantial adverse impacts related to lighting; impacts would be less-than- significant.

Lake Effect

Due to the reflection of polarized light from solar panels, birds flying above may mistake the panels for bodies of water. This phenomenon, known as the “lake effect”, has been demonstrated to affect species that can detect polarized light, such as aquatic insects and water birds. These species use polarized light as a visual cue to identify bodies of water. On the contrary, the human eye cannot distinguish polarized from non-polarized light. Lake Effect does not have a significant aesthetic impact on humans and furthermore the project is obscured by natural vegetation from the views of adjacent residences and nearby vantage points.

Glare

Most of the project's construction activities are planned to occur during daylight hours. Increased truck traffic and the transport of the solar arrays and construction materials to the

project site would temporarily increase glare conditions during construction. However, this increase in glare would be minimal and temporary. Construction activity would occur on focused areas of the site as construction progresses and any sources of glare would not be stationary for a prolonged period of time. Additionally, the surface area of construction equipment would be minimal compared to the scale of the project site. Therefore, construction of the proposed project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant during the construction period.

During operations, the reflection of sunlight would be the primary potential producer of glare off the glass surfaces of the solar panels in the proposed project.

A solar panel comprises numerous solar cells. A solar cell differs from a typical reflective surface in that it has a microscopically irregular surface designed to trap the rays of sunlight for the purposes of energy production. The intent of solar technology is to increase efficiency by absorbing as much light as possible (which further reduces reflection and glare).

As described in "Project Features," above, some or all of the project's panels could be mounted on single-axis trackers. Trackers allow the panels to follow the sun in its path from east to west across the southern sky as the day progresses. These devices orient the solar panels perpendicular to the incident solar radiation, thereby maximizing solar cell efficiency and potential energy output. The tracking systems are extremely accurate, and are capable of positioning the array so that the incident rays would be at or very near a surface normal (perpendicular angle). During midday conditions, when the sun is high in the sky, the law of reflection indicates that the reflected ray would be at an equally low angle and reflected in a direction toward the light source or back into the atmosphere away from receptors on the ground. When the sun is low on the horizon (near dawn or dusk), the sun's angle in the sky is low; however, reflected rays would still be directed away from ground-level receptors.

The panels would not be expected to cause substantial visual discomfort or impairment of vision for residents because the panels are designed to absorb as much sunlight as possible and therefore would have minimal reflectivity. The type of glare that could be expected in the most extreme conditions, when the sun is low in the sky, is a level of veiling reflection that may cause viewers to be less able to distinguish levels of contrast, but not cause a temporary loss of vision. Additionally, for most residents, glare effects would be further reduced by intervening elements in the immediate viewshed, such as vegetative screening created through the use of existing vegetation, and other homes or structures, which would obstruct views of the panels. Therefore, the proposed project would result in less-than-significant impacts related to glare for residences in the project vicinity.

Similarly, and also due to their low reflectivity, the panels are not expected to cause visual impairment for motorists on area roadways. Effects on eastbound motorists would likely be greatest in the early evening hours, when the sun is at its lowest arc in the western horizon. Glare would have its greatest impact on westbound travelers in the early morning hours, when the sun is rising in the east. Nonetheless, regardless of their position relative to the sun and the time of day, the panels would not be obscured by vegetation and not expected to cause visual impairment for motorists.

Because of the inherently low reflectivity of PV panels and with implementation of Mitigation Measure AES-1, in addition to compliance with the standards of the Zoning Ordinance,

General Plan, and Development Standards of San Bernardino County, glare impacts would be less-than-significant.

Significance: Possible significant adverse impacts have been identified or are anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

AESTHETICS MITIGATION MEASURES:

AES-1 *Lighting Requirements.* *The area of illumination from any lighting will be confined to within the site boundaries to minimize impacts to night sky views from surrounding properties. On-site lighting will be fully shielded, diffused, or directed in a manner to avoid glare directed at adjacent properties, roadways or any light trespass into any wildland areas surrounding the site that might affect nocturnal animals. No light will project onto adjacent roadways in a manner that interferes with on-coming traffic. All lighting will be limited to that necessary for maintenance activities, security, and safety purposes. All signs proposed by this project will only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign or by direct stationary neon lighting.*

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
II. AGRICULTURE AND FORESTRY RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Will the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located in the Important Farmlands Overlay):

- a) **No Impact.** The Farmland Mapping and Monitoring Program of the California Department of Conservation is charged with mapping Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance (Farmland) across the state. The project site is not within the survey boundary and is therefore not designated as Important Farmland. The project would not convert Farmland to non-agricultural use since the proposed project site is not designated as such. There is no impact and no further analysis is warranted.
- b) **No Impact.** The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. The current General Plan land use designation for the project area is RL, which allows the development of renewable energy generation facility with a CUP (Development Code Section 82.06). The proposed project area is not under a Williamson Act contract. There is no impact and no further analysis is warranted.
- c) **No Impact.** The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. The proposed project area is currently vacant land, which has never been designated as forest land or timberland. No rezoning of the project site would be required as the proposed energy facility is compatible with the current zoning designation of HV/RL-5. There is no impact and no further analysis is warranted.
- d) **No Impact.** The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The proposed project site is vacant and covered with desert vegetation. There is no impact and no further analysis is warranted.
- e) **No Impact.** The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. The current General Plan land use designation for the project area is HV/RL-5, which allows the development of renewable energy generation facility with a CUP (Development Code Section 82.04). There is no impact and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
III. AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district might be relied upon to make the following determinations. Will the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: *(Discuss conformity with the Mojave Air Quality Management Plan, if applicable):*

- a) **Less than Significant Impact.** The proposed project would not conflict with or obstruct implementation of the applicable air quality plan. The project site is in the Mojave Desert Air Basin (MDAB) and under the air quality planning jurisdiction of the MDAQMD. The MDAB area is designated “non- attainment” for State and federal ambient air quality standards for ozone (O₃) and inhalable particulate matter (PM-10).

The Mojave Air Quality Management Plan (AQMP) provides a program for obtaining attainment status for those monitored air pollution standards. The AQMP bases existing and future air pollution emissions on employment and residential growth projections, as derived from local and regional General Plans and other projections. While the proposed project is not identified specifically in the General Plan, it would not generate new homes or significant employment opportunities that will change the County’s projections.

Attainment of ozone standards is most strongly linked to air quality improvements in upwind communities; the Air Quality Impact Analysis attributes the majority ozone pollution in the MDAB to sources outside the air basin. PM-10 and PM-2.5, however, are affected by construction, unpaved road travel, open fires, and/or agricultural practices. Therefore, in order to limit the production of fugitive dust during implementation of the proposed project, construction activities would be conducted in accordance with MDAQMD Rules 403 - *Fugitive Dust* and 403.2 - *Fugitive Dust Control for the Mojave Desert Planning Area*. This includes using water trucks to minimize the production of visible dust emissions to 20 percent opacity in areas of where grading or vegetation removal occurs, within the staging areas, and on any unpaved roads utilized during project construction.

Over its lifetime, the proposed project would not violate the regulations set forth by the MDAQMD *Rule Book* or *CEQA and Federal Conformity Guidelines*. Electricity generation via the use of PV systems does not generate chemical emissions that would negatively contribute to air quality. The proposed project is designed to limit the amount of vegetation that would be removed and grading required for access, which would limit fugitive dust generated during the life of the project.

Given that the proposed project would not alter the population or employment projections considered during the development of the AQMP, and considering the minor emissions attributable to the proposed project during operation (refer to discussion in Item III.b below), impacts associated with AQMP consistency would be less than significant.

- b) **Less than Significant Impact with Mitigation Incorporated.** The proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Construction of the proposed project would generate emissions associated with grading, use of heavy equipment, construction worker vehicles, etc. However, these emissions are not anticipated to exceed the construction emission thresholds established by the MDAQMD due to the size and type of the proposed project. Therefore, construction emissions would be less than significant.

The project site is currently subdivided and zoned for single family residences with a total of 15 lots with the potential to generate between 1,500 to 3,600 vehicle trips per month. The proposed project would generate approximately 2-4 vehicle trips per month for maintenance purposes. Operation of the proposed project would be done remotely and the solar fields do not generate air emissions. Vehicle trips associated with the proposed project would generate emissions; however, due to the minimal number of vehicle trips per month, these emissions would not be sufficient to create or significantly contribute towards violations of air quality standards. Therefore, emissions associated with the operation of the proposed project would be significantly less than single family residences and is determined to be a less than significant impact.

In compliance with MDAQMD Rule 403, because the region is in non-attainment for particulate matter emissions, the use of Best Available Control Measures is required even if a project does not exceed thresholds. Best Available Control Measures for the project consist of enhanced dust control mitigation measures (see Mitigation Measure AQ-2); with these measures, PM-10 and PM-2.5 emissions would be reduced by about 40 percent. As noted in Item III.a above, all required dust abatement measures would be consistent with MDAQMD Rule 403.2 - *Fugitive Dust Control for the Mojave Desert Planning Area*.

Mitigation Measures AQ-1 and AQ-3, which describe standard County requirements imposed on the project would generate negligible air emissions during operations because the facility would be automated and would require minimal onsite personnel. Periodic repairs, equipment cleaning, and site monitoring would be conducted, but no permanent staff would be onsite. Solar panels and associated equipment would have an operating life of several decades; therefore, replacement of panels would be very infrequent. The solar panels may be cleaned twice annually, requiring a work crew and light trucks (5 or fewer vehicles). Maintenance and security personnel would visit the site on a limited basis. Based on these factors, operational traffic associated with the project would be minimal.

Project construction and operations are not expected to violate any air quality standard nor contribute substantially to an existing or projected air quality violation. Mitigation Measures

AQ-1 through AQ-3 are required to achieve compliance with regional air quality regulations and the County's CUP implementation requirements. With application of these mitigation measures, impacts are less than significant.

- c) **Less than Significant Impact.** The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). As previously discussed in Items III.a and III.b, the project's contribution to criteria pollutants during the temporary construction period would be localized and mitigated to below a level of significance. As also indicated, operational activities would generate insubstantial quantities of air pollutants that are not deemed cumulatively considerable. Since no other sources of potential long-term air emissions would result, impacts would be less than significant.
- d) **Less than Significant Impact.** The proposed project would not expose sensitive receptors to substantial pollutant concentrations (see Items III.a through III.c). The project's construction and operations would not result in any significant air pollutant emissions, and nearby sensitive receptors (consisting of residences) would not be significantly impacted by such emissions.

With regard to potentially hazardous air emissions, electricity generation via the use of PV systems does not generate chemical emissions that would negatively affect air quality. Small amounts of hazardous air pollutants are contained in the diesel exhaust of the construction equipment to be used to prepare the site and install the solar panels. Diesel exposure risk is calculated based on a 70-year lifetime with the receptor located outdoors permanently. Resident exposure to construction equipment exhaust emissions will only be for several months. The combination of limited exhaust particulate emissions, brief resident exposure and generally good daytime desert dispersion conditions renders hazardous emissions impacts as less-than-significant.

For those reasons, impacts are less than significant and an assessment of potential human health risks attributable to emissions of hazardous air pollutants is not required.

- e) **Less than Significant Impact.** The proposed project would not create objectionable odors that would affect a substantial number of people. Electricity generation via the use of PV systems does not generate emissions that would negatively contribute to air quality or produce objectionable odors. Potential odor generation associated with the proposed project would be limited to short-term construction sources such as diesel exhaust; however, no significant odor impacts are anticipated due to the short-term duration of such emissions, as well as the intervening distance to sensitive receptors. Odor generation impacts would be less than significant and no further analysis is warranted.

SIGNIFICANCE: Possible significant adverse impacts have been identified or are anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level considered less than significant:

AIR QUALITY MITIGATION MEASURES:

AQ-1 AQ/Operational Mitigation. Operation of all off-road and on-road diesel vehicles/equipment will comply with the County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)], including but not limited to:

- a) Equipment/vehicles will not be left idling for periods in excess of five minutes.
- b) Engines will be maintained in good working order to reduce emissions.
- c) Onsite electrical power connections will be made available where feasible.
- d) Ultra low-sulfur diesel fuel will be utilized.
- e) Electric and gasoline powered equipment will be substituted for diesel powered equipment where feasible.
- f) Signs will be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.
- g) All transportation refrigeration units will be provided electric connections.

AQ-2 AQ/Dust Control Plan. The applicant will prepare, submit, and obtain approval from San Bernardino County Planning of a Dust Control Plan (DCP) consistent with MDAQMD guidelines and a letter agreeing to include in any construction contracts/subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP will include the following elements to reduce dust production:

- a) Exposed soils and haul roads will be watered three (3) times per day to reduce fugitive dust during all grading/construction activities. Inactive areas will be treated with soil stabilizers such as hay bales, non-toxic soil binder, or aggregate cover.
- b) Street sweeping will be conducted when visible soil accumulations occur along site access roadways to remove dirt dropped by construction vehicles.
- c) Site access driveways and adjacent streets will be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday.
- d) Construction vehicle tires will be washed prior to leaving the project site.
- e) All trucks hauling dirt away from the site will be covered, and speeds on unpaved roads will be reduced below 15 miles per hour.
- f) During high wind conditions (i.e., wind speeds exceeding 25 miles per hour [mph]), areas with disturbed soil will be watered hourly and activities on unpaved surfaces will cease until wind speeds no longer exceed 25 mph.
- g) Storage piles that are to be left in place for more than three working days will either be sprayed with a non-toxic soil binder, covered with plastic or revegetated.

AQ-3 AQ – Installation. The developer will submit for review and obtain approval from County Planning of evidence that all air quality mitigation measures have been installed properly and that specified performance objectives are being met to the satisfaction of County Planning and County Building and Safety.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
IV. BIOLOGICAL RESOURCES - Will the project:				
a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc...) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SUBSTANTIATION: (Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database <input type="checkbox"/>): Burrowing owl				

a) Less than Significant Impact with Mitigation Incorporated.

Biological Resource Surveys

NOREAS conducted general biological investigations of the project site to identify and document any biological resources that might be adversely affected by construction or operation of the project. The Biological Resources Assessment (BRA) study area included the project parcels and the gen-tie path. Surveys were conducted in April 2014. Additional areas, including buffers, were analyzed as part of focused surveys. Focused surveys were conducted for desert tortoise, burrowing owl and rare plants. These reports are further described below.

The purpose of the general survey was to identify potential habitat for any threatened, endangered, or otherwise sensitive plant and wildlife species that may occur in the study

areas. The BRA lists all plant and wildlife species observed by NOREAS biologists in the study area. NOREAS also identified biological resources by researching plant and wildlife databases and through literature reviews. As a result of the initial surveys, follow-up focused surveys were conducted for several species, as described separately below. The BRA was prepared in April 2014, and the complete report with detailed findings and recommendations is included in Appendix B. Also found in Appendix B, with detailed findings and recommendations, are Focused Surveys for Burrowing Owl, Desert Tortoise and the Preconstruction Plant Inspection, dated April 2014. The results of all the surveys are summarized as applicable for Items IV.a to IV.f.

Plant Communities

Two vegetation communities/land cover types were observed within the study area: Creosote Bush Scrub and Developed/Disturbed Lands. The Project is not collocated with any U.S. Fish & Wildlife Service (USFWS)-designated critical habitat. However, notable quantities of mature Joshua Trees (*Yucca brevifolia*) were detected within the Project Site. No federal or state listed plant species were observed within the Project Site during field surveys.

The plant communities discussed above are composed of numerous plant species. Plant species observations and identifications were completed during the field investigations for the BRA study area. The BRA lists all plant species observed in the study area.

Special Status Plants

Sensitive Plant Species

Sensitive plants include those listed, or candidates for listing, by the USFWS and California Department of Fish & Wildlife (CDFW), and species considered sensitive by the California Native Plant Society (particularly Lists 1A, 1B, and 2).

No sensitive plant species were observed within the project site during the general biological field investigations or during focused surveys for rare plants, and none have been documented within 5.5 miles. The study area includes no USFWS-critical habitat for plants. Therefore, no significant impacts to rare plants are anticipated and no mitigation measures are required.

Regulated Plant Species

The San Bernardino County Development Code, Title 8, Chapter 88.01, *Plant Protection and Management*, implements and augments provisions of the California Desert Native Plants Act (California Food and Agricultural Code Section 80000 et seq.), which is intended to regulate the harvesting of desert native plants and require the transplantation of plants from development sites. The County code requires compliance with the Act before the issuance of a development permit or approval of a land use application that would result in removal of the regulated species.

The Preconstruction Plant Inspection, dated April 2014, indicated a total of 33 Joshua trees were detected within Project limits. Eleven (11) of those trees are within the Project site and were determined to be candidates for transplant by a certified arborist and native plant specialist. Alternatively, 22 specimens will be avoided by Project implementation or were

determined to have poor branching structure, defects, or other unique characteristics that imply they're poor transplant or salvage specimens.

Additionally, 1 silver cholla (*Cylindropuntia echinocarpa*), 13 branched pencil cholla (*Cylindropuntia ramosissima*), and 3 cottontop cactus (*Echinocactus polycephalus*) were mapped within the study area. No clonal creosote (*Larrea tridentate*) rings were found. Of the cacti species observed within the Project Site, 6 branched pencil cholla and 3 cottontop cactus are candidates for transplant / relocation. Seven (7) branched pencil cholla and 1 silver cholla will be avoided within the Project Site, or were determined to be either too large, defective, or were not healthy enough to undergo transplant or relocation activities with a reasonable probability of long term success. Furthermore, all Joshua trees and cacti identified within the gen-tie line will be avoided (i.e., 12 Joshua trees, 1 silver cholla and 2 branched pencil cholla).

Given the extent of anthropogenic disturbance any species currently using these lands are presumed to be acclimated to the disturbance regime present. No special status plants were detected within the Project Site, and the habitat quality on site is low. Therefore, the potential for impacts to federal or state listed plant species would be less than significant.

Sensitive Wildlife Species

General Wildlife Inventory

Wildlife species observations and identifications were completed during the field investigations for the BRA. The BRA lists all wildlife species observed in the study area, including sensitive wildlife species. Sensitive wildlife species include those species listed as endangered or threatened under the federal Endangered Species Act or the California Endangered Species Act, candidates for listing by USFWS or CDFW, and special species of concern to the CDFW.

No federal or state listed wildlife species were observed within the Project Site during the 2014 field surveys. Nonetheless, two Burrowing Owls were observed utilizing burrows located outside of Project Site boundaries – southwest of the intersection of Reche Road and Bowman Trail. Additionally, a class two Desert Tortoise burrow was detected outside of the Project Site and north of Herdmans Road. The USFWS defines a class two Desert Tortoise burrow as a burrow which is in good condition, and definitely desert tortoise; but includes no evidence of recent use. Special-status wildlife species known to occur within 10 miles of the Project and their potential for occurrence are detailed within the BRA. The study area includes no USFWS-critical habitat for wildlife.

The BRA lists 18 sensitive wildlife species identified in database records as occurring within the site vicinity, but none were indicated to occur within the project site.

Desert Tortoise

Desert tortoise (*Gopherus agassizii*) is a federal and State Threatened species. The project study area is not located in USFWS-designated critical habitat for the desert tortoise. The nearest designated USFWS critical habitat is approximately 20 miles to the southeast.

NOREAS performed a USFWS protocol focused survey for the desert tortoise on the site, including a 200 foot buffer surrounding the site. Field surveys were performed on 18, 19, 20, 21, and 22 March, and 2, 6 and 7 May 2014. Biologists performed pedestrian belt

transects spaced at roughly 10 meter intervals to determine if tortoises were present in the project area or buffer. No individual tortoises were observed during census efforts, and the action area does not include USFWS critical habitat. A Class 2 Desert Tortoise burrow was detected outside of the Project Site and north of Herdmans Road within the buffer area. The USFWS defines a Class 2 Desert Tortoise burrow as a burrow which is in good condition, and definitely utilized by Desert Tortoise; but includes no evidence of recent use.

The project area and buffer are heavily disturbed, with evidence of on- and off -highway vehicle use. It supports creosote bush scrub vegetation; dominated by widely spaced creosote (*Larrea tridentata*) and Burrow weed (*Ambrosia dumosa*), with bare ground between them. The majority of the bare ground includes lands that have been disked, cleared, or otherwise altered by human activities. Given the extent of anthropogenic disturbance any species currently using these lands are presumed to be acclimated to the disturbance regime present. No Desert Tortoises were observed within the Project Site, and the habitat quality on site is low. Therefore, the Project seems unlikely to affect the species.

Common ravens prey on desert tortoise populations. Ravens have the potential to occupy the site during phases of development and use, including construction, operation, maintenance, and decommissioning. The project has the potential to increase raven subsidies (i.e. food, water, nest sites) and to increase raven populations (and decrease desert tortoise populations) at the project site.

With the implementation of Mitigation Measures BIO-1, which requires preparation and implementation of an environmental education program for construction personnel that shows deference to Desert Tortoise protection; BIO-2, which requires pre-construction surveys for Desert Tortoise and exclusion fence be installed around the Project Site, and BIO-3, which requires the preparation of a raven management plan and payment of a raven management fee, the potential for impacts to Desert Tortoise would be reduced to less than significant.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) has been designated by the CDFW as a species of special concern. "State Species of Special Concern" status applies to animals not listed for protection under the federal Endangered Species Act or the California Endangered Species Act.

Protocol surveys (detailed in Appendix B) were performed on 19, 20, 21 and 22 March; 01, 02, 06, 07 and 08 May; 06 and 27 June, 2014; which is during the breeding season (March through late August). Survey methods were derived from generally accepted professional standards including the 1993 California Burrowing Owl Consortium Survey Protocol and Mitigation Guidelines (CBOC 1993), the 1995 and 2012 California Department of Fish and Game Staff Reports on Burrowing Owl Mitigation (CDFG 1995 and 2012). Accordingly, a methodical pedestrian-survey for owl burrows and sign was conducted by walking through areas of suitable habitat within study area limits (including evaluations of man-made structures, debris piles, etc.). Survey transects were spaced at approximately 100-ft intervals to allow for complete visual coverage of the study area. Where necessary, transect spacing was reduced or expanded to account for differences in terrain, vegetation density, and visibility.

No Burrowing Owls were observed within the Project Site. However, two pairs of adult Burrowing Owls and three juvenile Burrowing Owls were observed utilizing four active burrows located outside the Project Site limits, but within the buffer area. Given the extent of anthropogenic disturbance there; the Project Site is not considered high quality Burrowing Owl habitat. Furthermore the Project Site lacks perennial water sources and Burrowing Owl predators were observed within the study area. As a consequence, the Project would not be expected to result in the take of Burrowing Owls or their active nests.

In accordance with CDFW's Staff Report on Burrowing Owl Mitigation (2012), a "take avoidance survey" for the burrowing owl should be conducted no less than 14 days prior to the initiation of ground disturbance activities. If no burrowing owls are detected during the take avoidance surveys, implementation of ground disturbance activities could proceed without further consideration of this species. If burrowing owls are detected during the take avoidance survey, avoidance and minimization measures would then be required. With the implementation of Mitigation Measures BIO-1, which requires preparation and implementation of an environmental education program for construction personnel that shows deference to burrowing owl protection, BIO-4, which requires pre-construction surveys for burrowing owl, and BIO-5, which requires the implementation of a burrowing owl management plan for the avoidance of take, the potential for impacts to burrowing owl would be reduced to a level of less than significant.

Lake Effect

Due to the reflection of polarized light from solar panels, birds flying above may mistake the panels for bodies of water. This phenomenon, known as the "lake effect", can cause birds to collide with the panels, resulting in avian injuries and mortalities.

Current knowledge about collision-related avian injury and mortality associated with solar PV facilities in California is limited and is primarily based on preliminary avian monitoring data from the Desert Sunlight Solar Farm, located on over 4,000 acres of land. Ancillary data points are available but are generally associated with large (>1000 acres) solar farms near large water bodies and migratory corridors. Existing data are based on incidental opportunistic observances rather than monitoring and collection conducted in accordance with standardized methods; therefore, the data cannot support conclusions about the numbers or species of birds that may be affected from collisions with solar panels at the project site.

Although collision-related avian injuries and mortalities cannot be adequately estimated for the project, design features will help minimize potential impacts. The project site is 33 acres, which is significantly smaller than the Desert Sunlight Solar Farm and other solar farms where collision-related avian mortalities have been documented. Of the 33 acres, only 25 acres will be covered with panels. The blocks of panels will be broken up by eight access roads transecting the site and inverter blocks. These roads and inverters will serve as a visual cue, helping to prevent birds from misinterpreting the panels as water.

As indicated in the BRA, the project site is heavily disturbed and no federal or state listed wildlife have been documented onsite. The project site is not located in highly trafficked migratory corridors for water fowl and sensitive species. The likelihood of avian species utilizing the project site as nesting habitat is small, as there is higher-quality habitat available within the region. Additionally, there are no ponds on or around the site, further

reducing the chance of a bird confusing the panels for water. Therefore, the potential for impacts to federal or state listed species would be less than significant.

- b) **Less than Significant Impact with Mitigation Incorporated.** The site does not contain any riparian habitat nor were there obvious indicators of well-defined water conveyance bed, bank or channel features that would be assumed to provide unique functions and values for wildlife. Given the extent of anthropogenic disturbance (e.g., abundance of trash, cleared lots and on- and off-highway vehicle traffic), any species currently using these lands are presumed to be acclimated to the disturbance regime present. No federal or state listed plant species have been documented within the Project Site. The site does not include any USFWS-designated critical habitat, but the site is listed as the Western Mojave Recovery Unit for Desert Tortoise.

With the implementation of Mitigation Measures BIO-1, which requires preparation and implementation of an environmental education program for construction personnel that shows deference to Desert Tortoise protection; BIO-2, which requires pre-construction surveys for Desert Tortoise and exclusion fence be installed around the Project Site, and BIO-3, which requires the preparation of a raven management plan and payment of a raven management fee, the potential for impacts to Desert Tortoise would be reduced to less than significant.

- c) **No Impact.** NOREAS assessed the BRA study area to determine whether any waters and/or wetlands exist on the site that could potentially be under the jurisdiction of the federal government, through the U.S. Army Corps of Engineers. No such waters and/or wetlands were identified on the site. The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, and no mitigation measures are required.
- d) **Less than Significant Impact with Mitigation Incorporated.** While some native wildlife species, especially those particularly tolerant of human disturbances, may occasionally breed on the site, no native wildlife have established nursery or breeding colonies on the site. No naturally occurring native fish populations are present within the project site because the project site has no standing water or significant hydrological drainages where water would be present for an extended period of time.

Wildlife Corridors

The project area offers limited utility as a wildlife corridor. The general vicinity of the site includes residential development, roads and other infrastructure that prevents substantial wildlife movement. The site also has existing dirt drives which interrupt any corridor function that the site provides. Nonetheless, the following project design features will minimize impacts to wildlife movement within the BRA study area:

- **Lighting:** The project has been designed to minimize night lighting. All outdoor lighting, including street lighting, will be provided in accordance with the Night Sky Protection Ordinance and will only be provided as necessary to meet safety standards. Outdoor lighting will be shielded or directed away from neighboring properties to minimize off-site impacts.
- **Noise:** The projected increases in noise will be reduced to the maximum extent practicable during construction activities. During all grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating

and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent possible. The construction contractor will place all stationary construction equipment so that emitted noise is directed away from off-site locations.

- **Human and Vehicular Disturbances:** Operations and maintenance of the solar facilities will only occur on occasion. Vehicles will only be operated on existing roads and reduced speed limits will be observed to minimize the risk of wildlife-vehicle collisions.
- **Dust:** Standard construction-related Best Management Practices, such as dust control, will be implemented.

Nesting Birds

The study area has the potential to support nesting birds. Disturbing or destroying active nests during construction would be a violation of the Migratory Bird Treaty Act. In addition, nests and eggs are protected under Fish and Game Code Section 3503. Thus, the removal of vegetation during the breeding season is considered a potentially significant impact. Nesting activity typically occurs from February 15 to August 31.

In order to avoid potentially significant impacts during construction, the project will be mitigated in one of two ways: 1) habitat avoidance by removing vegetation outside of the nesting season, or 2) if construction is to occur during the nesting season, avoidance of active nests as deemed appropriate by a qualified biologist during construction monitoring. The implementation of these measures, detailed in Mitigation Measure BIO-6, would reduce this impact to a level that is less than significant.

Foraging Raptors

Although there is no raptor nesting habitat on the project site, the study area may support foraging habitat for a number of raptor species. However, in light of the amount of habitat that remains available for this species within the region, removal of foraging habitat represents a less than significant impact to regional raptor populations.

- e) **Less Than Significant Impact.** The San Bernardino County General Plan (Conservation Element and Open Space Element) sets forth the following policies relevant to the protection of natural resources:

1. Encourage the greater retention of existing native vegetation for new development projects to help conserve water, retain soil in place and reduce air pollutants.

Project Consistency: As described further in the project description section above, the project consists of development of approximately 35 acres. The project would not require regular use of water during operations. Water use could be required for occasional panel washing (approximately two times per year), resulting in less than 1 acre-foot of water consumed. During construction, dust control measures (see Mitigation Measure AQ-2) would be employed to reduce fugitive dust during grading and other ground disturbance activities. During operations, potential sources of dust would be limited to onsite roadways within the site; however, these would consist of gravel, an aggregate base, or native materials with a soil stabilization material; therefore, dust and air pollutants would be contained and limited to less than significant levels. As described

above in Section IV.b., the County's decommissioning requirements in Chapter 84.29 of the County's Development Code, Renewable Energy Generation Facilities, Decommissioning Requirements (Section 84.29.6060) state that native plants must be salvaged prior to construction and transplanted and the site must be revegetated subsequent to decommissioning with native plants.

2. Require future land development practices to be compatible with the existing topography and scenic vistas, and protect the natural vegetation.

Project Consistency: The project site does not contain scenic vistas. The project will not require significant manipulation of the existing site grades that will be inconsistent with the surrounding topography. See response to IV.e.1. above regarding protection of the natural vegetation.

3. Require retention of existing native vegetation for new development projects, particularly Joshua trees, Mojave yuccas and creosote rings, and other species protected by the Development Code and other regulations.

Project Consistency: See response to IV.e.1. above regarding protection of native vegetation. Plants protected by the California Desert Native Plants Act are afforded removal and relocation protections under the County Development Code, Title 8, Chapter 88.01, *Plant Protection and Management*. The project will comply with the County Development Code and any permit conditions, development of the proposed project would not conflict with the General Plan, local policies or ordinances protecting biological resources.

4. Reduce disturbances to fragile desert soils as much as practicable in order to reduce fugitive dust.

Project Consistency: See response to IV.e.1. and 2. above regarding preventing fugitive dust emissions and the limited grading activities proposed onsite.

5. Ensure that Off-Highway Vehicle use within the plan area and in the surrounding region is managed to protect residential uses and environmentally sensitive areas.

Project Consistency: Off-Highway Vehicle use will not be permitted on the project site; this will be enforced with the installation of security fencing around the project perimeter.

- f) **No Impact.** The project site is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. The project will have no significant impact relating to habitat Conservation Plans, Natural Community Conservation Plans, and Recovery Plans. There would be no take of critical habitat and, therefore, no land use conflict with existing management plans would occur.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

BIOLOGICAL RESOURCES MITIGATION MEASURES:

BIO-1 Worker Environmental Awareness Program. Prior to the start of construction activities, the Applicant shall prepare and implement a Worker Environmental

Awareness Program (WEAP) for site construction works. This program shall include information specific to protected or special-status species which could potentially be impacted by the project, including Desert Tortoise and burrowing owl. The WEAP will summarize the general rules and procedures that must be followed by each person on the Project to assure the minimization or complete avoidance of impacts to protected biological resources and special status species.

BIO-2 Desert Tortoise Mitigation – Pre-Construction Surveys. *Prior to ground disturbance, the Applicant will retain a qualified biologist to conduct desert tortoise surveys within the area to be disturbed. The results of the surveys, including graphics showing the locations of any desert tortoise detected and any avoidance measures required, will be submitted to the County of San Bernardino within 14 days following completion of the surveys.*

If desert tortoise are detected, the Applicant shall prepare a mitigation plan for the avoidance of take, which will be submitted for review to the County of San Bernardino prior to implementation.

If desert tortoise are not detected during pre-construction surveys, the Applicant shall install desert tortoise exclusion fencing, per the USFWS published guidelines, around the site to prevent tortoise from entering the project site during construction activities.

BIO-3 Desert Tortoise Mitigation – On and Off-site Raven Management Plan *In order to offset direct impacts from development projects with the potential to increase raven populations (and decrease desert tortoise populations), the applicant shall develop an on-site raven management plan. This plan is to eliminate and/or minimize the availability of subsidies (i.e. food, water, nest sites), and the potential for ravens to occupy the site during all phases of development and use, including construction, operation, maintenance, and decommissioning. The applicant shall also contribute to the regional raven management plan, which the National Fish and Wildlife Foundation manages. For projects with 30-year durations, the contribution to the regional plan is \$105 per acre impacted. The total contribution includes acreage associated with substations and transmission lines.*

BIO-4 Burrowing Owl Mitigation – Pre-Construction Surveys. *Within 14 days prior to ground disturbance, the Applicant will retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey will be performed by walking parallel transects spaced no more than 20 meters apart, and will be focused on detecting burrows that are occupied, or are suitable for occupation, by the burrowing owl. The results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, will be submitted to the County of San Bernardino within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures will be implemented:*

- If burrowing owls are observed using burrows on-site during the non-breeding season (September through January, unless determined otherwise by a qualified biologist based on field observations in the region), occupied burrows will be left undisturbed, and a burrowing owl habitat management plan shall be created (see below).*

- *If avoiding disturbance of owls and owl burrows on-site is infeasible, owls will be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with protocols established in CDFW's Staff Report on Burrowing Owl Mitigation (2012). Specifically, exclusion devices, utilizing one-way doors, will be installed in the entrance of all active burrows. The devices will be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows will then be excavated by hand and/or mechanically and refilled to prevent reoccupation. Exclusion will continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist.*
- *Any active burrowing owl burrows detected on-site during the breeding season (February through August, unless determined otherwise by a qualified biologist based on field observations in the region), will not be disturbed and a burrowing owl habitat management plan shall be created (see below). To the maximum extent practicable, a buffer zone from occupied nests should be maintained during physical ground disturbing activities. Once nesting has ended, the buffer may be removed.*

BIO-5 Burrowing Owl Mitigation – Management Plan. *In the event that pre-construction surveys indicate the presence of burrowing owl within the project site, the applicant shall prepare a habitat management plan for the burrowing owl prior to issuance of a grading permit. The plan will include provisions for the avoidance of take, and for the protection of foraging habitat and replacement of any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-1. At a minimum, the plan will include the following elements:*

- *If occupied burrows are to be removed, the plan will contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations that would compensate for the burrows removed.*
- *All active on-site burrows excavated as described in Mitigation Measure BIO-1 will be replaced with suitable natural or artificial burrows within the preservation areas approved by the County of San Bernardino.*
- *Measures prohibiting the use of rodenticides during the construction process if any active on-site burrows are identified.*
- *The plan will ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within off-site mitigation areas.*
- *The Burrowing Owl Management Plan will be submitted to the County of San Bernardino for review prior to issuance of a grading permit for the Project, if such plan is deemed necessary based upon the results of pre-construction surveys.*

BIO-6 Nesting Bird Mitigation – Pre-Construction Surveys. *Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season (February through August, unless determined otherwise by a qualified biologist based on observations in the*

region), the Applicant will retain a qualified biologist to determine if active nests of species protected by the Migratory Bird Treaty Act or the California Fish and Game Code are present within or adjacent to the disturbance zone or within 100 feet (300 feet for raptors) of the disturbance zone. The surveys will be conducted no more than seven days prior to initiation of disturbance work within active project areas. If ground disturbance activities are delayed, then additional pre-disturbance surveys will be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. If ground disturbance will be phased across the project site, pre-disturbance surveys may also be phased to conform to the development schedule.

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the County of San Bernardino) will be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers will be established in the field with highly visible construction fencing or flagging, and construction personnel will be instructed on the sensitivity of nest areas. A qualified biologist will serve as a construction monitor during those periods when construction activities will occur near active nests to ensure that no inadvertent impacts on these nests occur.

The results of pre-construction nesting bird surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, will be submitted to the County of San Bernardino within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
V. CULTURAL RESOURCES - Will the project				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUBSTANTIATION: (Check if the project is located in the Cultural <input type="checkbox"/> or Paleontologic Resources <input type="checkbox"/> overlays or cite results of cultural resource review):				

- a) **Less than Significant Impact with Mitigation Incorporated.** BCR Consulting (BCR) prepared a Cultural Resources Assessment (CRA) for the 35-acre project site and approximately 1.4 miles of linear interconnection upgrades in July 2014. The purpose was to identify and document any cultural resources that might be located in the project's area of potential effect and to evaluate such resources pursuant to National Historic Preservation Act Section 106, CEQA, and the County's General Plan. The CRA identified historic or archaeological properties by means of pedestrian survey and research in appropriate historical and archaeological archives. The full report, with detailed findings and recommendations, is included as Appendix C.

Literature Review and Records Search

BCR conducted a cultural resources records search and literature review at the California Historic Resources Information System (CHRIS). A records request was also made to the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California. BCR also reviewed databases for the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and documents and inventories published by the California Office of Historic Preservation, including California Points of Historical Interest, California Historical Landmarks, Listing of National Register Properties, and the Inventory of Historic Structures.

The records search revealed that six cultural resources studies have previously been conducted within a one-mile radius of the project site; one of these studies partially included the site itself. The studies did not result in the recording of any cultural resources.

Native American Heritage Commission (NAHC) Records Search and Consultation

BCR commissioned a Sacred Lands File (SLF) records search through the NAHC, which is the State's trustee agency for the protection and preservation of American Indian cultural resources. The SLF search did not indicate the presence of American Indian or prehistoric cultural resources (including properties, places, or archaeological sites) in the vicinity of the project site.

An SLF is not an exhaustive inventory of sacred places; thus, NAHC provides a list of culturally affiliated tribes and individuals that may have knowledge of the religious and cultural significance of the properties in the area of potential effect. In compliance with State and federal mandates, BCR initiated consultation with the 11 listed tribes and interested American Indian consulting parties by requesting information regarding American Indian or prehistoric resources (archaeological sites, sacred lands, or artifacts) that may be affected by the proposed project. As of December 2013, BCR had received one response from the American Indian community. Daniel McCarthy, Director of the Cultural Resources Management Department of the San Manuel Band of Mission Indians, responded via email on May 15, 2013, requesting a copy of the CRA when completed. The CRA was sent to Mr. McCarthy on June 13, 2013. No additional comment has been received from the San Manuel Band.

Pedestrian Field Survey

To identify any previously unrecorded archaeological resources and to determine the potential for buried archaeological deposits, BCR performed pedestrian field surveys of the project site on June 11 and 17, 2014. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the project site, where accessible, and within the 500 foot buffer surrounding the project site and interconnection upgrades. BCR recorded any identified resources using Department of Parks and Recreation 523 forms, GPS coordinates for mapping purposes, and digital photography.

Survey Results

During the field survey, BCR recorded three isolated finds in highly disturbed contexts. The isolated finds included jasper flakes and prehistoric ceramic brownware sherds. The finds each occurred within the 1.4 miles of proposed interconnection upgrades in the Reche Road frontage. Isolated finds are not associated with archaeological site deposits and are not considered “historical resources”. No other cultural resource discoveries were noted during the field survey.

The isolated finds were recorded on Department of Parks and Recreation 523 Forms.

Conclusion

Based on the lack of historical resources on the site, as determined by records searches and field surveys, the project would not cause a substantial adverse change in a historical resource. With the implementation of mitigation measure CR-1 and CR-2, the project impacts to historic resources will be reduced to a level which is less than significant.

- b) **Less than Significant Impact with Mitigation Incorporated.** The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 (see Item V.a above). Records searches and field surveys in support of the CRA identified no archaeological resources on the site; therefore, the effects of the project on such resources are not considered a significant effect on the environment (CEQA Guidelines §15064.5(c)(4)). Mitigation measures require the applicant to retain on-call a qualified archaeologist. In the event of the discovery of buried cultural resources, the project archaeologist would be brought on-site to monitor ground-disturbing activities and excavations and temporarily redirect activities from the vicinity of the find in order to

evaluate the significance of the resource and to provide proper management recommendations. See Mitigation Measures CR-1 and CR-2 below.

- c) **Less than Significant Impact with Mitigation Incorporated.** BCR assessed impacts to paleontological resources in the CRA. Appendix D to the CRA contains the results of a paleontology records check prepared by the San Bernardino County Museum. The purpose of this records check was to determine the likelihood of any onsite paleontological resources being found and to determine the potential for disturbance of undiscovered resources during construction, pursuant to CEQA and the County's General Plan.

Previous geologic mapping indicates that the project site is situated upon Pleistocene older alluvium, overlain in some areas by a thin sedimentary veneer of Holocene alluvium. The Holocene alluvium has low potential to contain fossil resources; however the Pleistocene deposits have the potential to contain fossil resources. Due to this, a records search of the Regional Paleontologic Locality Inventory at the San Bernardino County Museum was conducted. The Regional Paleontologic Locality Inventory search did not indicate recorded paleontologic source localities within the project site or within a one mile radius.

To minimize the potential for impact to paleontological resources, the project would be subject to Mitigation Measure CR-2, which would require consultation with a qualified archeologist in the event of a find. The implementation of CR-2 would reduce impacts to paleontological resources to a level that is less than significant.

- d) **Less than Significant Impact with Mitigation Incorporated.** Field surveys conducted as part of the CRA did not encounter any evidence of human remains. The project site is not located on or near a known cemetery, and no human remains are anticipated to be disturbed during the construction phase. Mitigation Measure CR-3 ensures that in accordance with applicable regulations, construction activities would halt in the event of discovery of human remains, and consultation and treatment would occur as prescribed by law.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

CULTURAL RESOURCES MITIGATION MEASURES:

CR-1 Construction Monitoring – Reche Road. *A qualified archaeological monitor shall be present during earthmoving activities proposed within the Reche Road frontage. The monitor shall be empowered to temporarily halt or redirect construction work in the vicinity of any find until the project archeologist can evaluate it. In the event of a new find, salvage excavation and reporting may be required.*

CR-2 Resource Evaluation and Disposition. *If archaeological resources are encountered during implementation of the project, ground-disturbing activities will be temporarily redirected from the vicinity of the find, and the archeologist shall be contacted to assess the nature and significance of the find. The archaeologist shall have the authority to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment that may include the development and implementation of a data*

recovery investigation or preservation in place. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS SBAIC at the San Bernardino County Museum in Redlands, California. The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS-SBAIC. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The Applicant, in consultation with the Lead Agency and archaeologist, will designate repositories in the event that resources are recovered.

- CR-3 Human Remains.** *If human remains are encountered unexpectedly during construction excavations and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action will be taken in dealing with the remains. The landowner will then undertake additional steps as necessary in accordance with CEQA Guidelines Section 15064.5(e) and PRC Section 5097.98.*

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
VI. GEOLOGY AND SOILS - Will the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map Issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 181-B of the California Building Code (2001) creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located in the Geologic Hazards Overlay District):

- a) i) **No Impact.** The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone. While the potential for onsite ground rupture cannot be totally discounted (e.g., unmapped faults could conceivably underlie the project site), the likelihood of such an occurrence is considered low due to the absence of known faults within the site. There is no impact related to the exposure of persons or structures to rupture of a known earthquake fault.
- ii) **Less than Significant Impact.** The project site is within a seismically active region and is potentially subject to strong ground acceleration from earthquake events along major regional faults. The nearest identified faults to the project site are the Camp Rock Emerson Copper Mountain fault (located approximately 2 miles east of the site) and the Homestead Valley fault (located approximately 2-3 miles to the west), which are both capable of generating significant seismic activity.
- The proposed project would not include any habitable structures. Nonetheless, the design of any structures on-site would incorporate measures to accommodate projected seismic loading, pursuant to existing California Building Code and local building

regulations. Specific measures that may be used for the proposed project include proper fill composition and compaction; anchoring (or other means of for securing applicable structures); and the use of appropriate pipeline materials, dimensions, and flexible joints. Based on the incorporation of applicable measures into project design and construction, potential project impacts associated with strong seismic ground shaking would be less than significant.

- iii) **No Impact.** Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Other types of seismic-related ground failure include ground rupture (as discussed in Section VI.a.i), landslide (as discussed in Section VI.a.iv), dynamic ground subsidence (or settlement), and lateral spreading.

Loose granular soils are most susceptible to liquefaction, and the phenomenon is generally restricted to saturated or near-saturated soils at depths of less than 50 feet. As detailed in the Geotechnical Investigation prepared for the project by Pacific Coast Land Consulting (see Appendix D), the soils underlying the Project site include Holocene Age alluvial deposits consisting of sand, silt, and gravel. Soils on the site are medium dense to very dense. A review of water well data indicates groundwater levels are 242 feet beneath the ground surface. Due to the density of soils and depth of groundwater below the site, the site is not considered to be susceptible to liquefaction. The potential project impacts associated with liquefaction would be less than significant and no further analysis is warranted.

- iv) **No Impact.** The proposed project would not have any risks associated with landslides. Landslides are the downslope movement of geologic materials. The stability of slopes is related to a variety of factors, including the slope's steepness, the strength of geologic materials, and the characteristics of bedding planes, joints, faults, vegetation, surface water, and groundwater conditions. The project area is relatively flat terrain where landslides have not historically been an issue; therefore, no significant impacts are anticipated with respect to seismic-related (or other) landslide hazards, and no further analysis is warranted.

- b) **No Impact.** Construction activities could result in substantial soil erosion if the sites are not properly designed. The potential impacts of soil erosion would be minimized through implementation of Development Code requirements. Specifically, the applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the requirements of the National Pollutant Discharge Elimination System General Construction Permit. The SWPPP would prescribe temporary Best Management Practices to control wind and water erosion during and shortly after construction of the project. A preliminary Water Quality Management Plan will be prepared to specify permanent Best Management Practices to control erosion and sedimentation once construction is complete (see Section IX.c for related discussion).
- c) **No Impact.** The Geotechnical Investigation indicates that site soils typically consist of Holocene Age alluvial deposits consisting of sand, silt, and gravel. Existing alluvial deposits found on-site may be re-used as engineered fill, provided Geotechnical Investigation recommendations are adhered to. From a geotechnical standpoint, the site is suited for driven pier foundations to support the structures associated with the proposed solar array. During construction, the geotechnical engineer would provide on-site observation of site preparation and grading, fill placement and foundation installation, thus ensuring that

geotechnical conditions are as anticipated and that the contractor's work meets with the criteria in the approved plans and specifications.

Overall, adherence to the Geotechnical Investigation recommendations and implementation of San Bernardino County Development Code grading standards, as applicable, would minimize the potential impact of on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. General Plan Geologic Hazards Overlay mapping (FI14C, Landers/San Bernardino) for the project area indicates that the area is not expected to be subject to landslide or liquefaction. The impact of geologic instability is therefore less than significant and no further analysis is warranted.

- d) **No Impact.** Expansive (or shrink-swell) behavior is attributable to the water- holding capacity of clay minerals and can adversely affect the structural integrity of facilities. In general, compliance with Building Code requirements would minimize potential impacts to project facilities. Site soils are determined by the Geotechnical Investigation to be typically medium dense to very dense, are deemed to be non-expansive. Prior to placing any fills or constructing any overlying improvements, loose surface soils would be scarified and compacted according to Geotechnical Investigation specifications.

The lack of housing or permanent employees on the site ensures that risks to human safety would be minimal. Therefore, impacts would be less than significant and no further analysis is warranted.

- e) **No Impact.** The project does not propose to use septic tanks or alternative wastewater disposal systems; therefore, no impacts are would occur. No further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
VII. GREENHOUSE GAS EMISSIONS - Will the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The project would not generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. In September 2006, the State enacted the Global Warming Solutions Act (Assembly Bill 32), which was created to address greenhouse gases emitted by human activity and implicated in global climate change. The Act requires that the GHG emissions in California be reduced to 1990 levels by 2020. This is part of a larger plan in which California hopes to reduce its emissions to 80 percent below 1990 levels by 2050.

Additionally, through the California Climate Action Registry (now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e., from the project site itself and from activities directly associated with operations) and indirect sources (i.e., not directly associated with the project, but impacted by its operations). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

As discussed in Section III (Air Quality) of this document, the proposed project's primary contribution to air emissions is attributable to construction activities, including the delivery of PV panels, support structures and other project equipment to the site. Project construction would result in GHG emissions from construction equipment, panel and project equipment deliveries, and construction workers' personal vehicles traveling to and from the site. Construction-related GHG emissions vary depending on the level of activity, length of the construction period, specific construction operations, types of equipment, and number of personnel.

These emissions are anticipated to be less than the thresholds established by the MDAQMD and would not prevent the State from reaching its greenhouse gas reduction targets.

Operational-period emissions would be produced through vehicle travel for panel cleaning, maintenance, and security. Operational emissions are anticipated to be minimal and would be less than significant. Additionally, during its operational life, the project would fully offset its operational GHG emissions. The offset effect of solar power results from the displacement of electrical power production that would otherwise occur at fossil-fueled power plants that necessarily generate GHGs alongside electricity. As designed, the

3-megawatt rated plant would annually produce 9,168 megawatt-hour of electrical energy. The offset created by 9,168 megawatt-hour per year from a solar power facility would be 6,969 tons of carbon dioxide equivalent. Therefore, the project would reduce regional GHG emissions during operations, and GHG impacts are considered beneficial.

- b) **Less than Significant Impact.** The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. In December 2011, the County Board of Supervisors adopted a GHG Reduction Plan. The GHG Reduction Plan states that “with the application of the GHG performance standards, projects that are exempt from CEQA and small projects that do not exceed 3,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year will be considered to be consistent with the Plan and determined to have a less than significant individual and cumulative impact for GHG emissions.” (p. 4-5). Applicable performance standards are identified in the GHG Reduction Plan and are included as Conditions of Approval when discretionary approvals are granted. Therefore, all applicable performance standards will be included in the Conditions of Approval for the project. In addition, the project is well below the 3,000 MTCO₂e per year screening threshold.

Because the project will be required to comply with all applicable performance standards identified in the GHG Reduction Plan, and GHG emissions would not exceed the 3,000 MTCO₂e per year screening threshold, the project is determined to be consistent with the County's GHG Reduction Plan.

No significant adverse impacts are identified or anticipated and no mitigation measures are required

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
VIII. HAZARDS AND HAZARDOUS MATERIALS - Will the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** The proposed project is not expected to result in impacts from hazards and hazardous materials with respect to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This is because the proposed project would not involve the routine transport, use, or disposal of significant amounts of hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. During construction, the proposed project would involve the transport of general construction materials (i.e., concrete, wood, metal, fuel, etc.) as well as the materials necessary to construct the proposed PV arrays. Construction activities would involve the use of hazardous materials such as fuels and

greases for the fueling and servicing of construction equipment. Such substances may be stored in temporary storage tanks/sheds that would be located on the project site. Although these types of materials are not acutely hazardous, they are classified as hazardous materials and create the potential for accidental spillage, which could expose workers. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and County regulations. No extremely hazardous substances (i.e., governed under Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of project construction. As needed, Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel as required by the SBCFD Hazardous Materials Division. During construction of the facility, non-hazardous construction debris would be generated and disposed of in local landfills or recycled. Sanitary waste would be managed using portable toilets, with waste being disposed of at approved sites.

The PV panels and inverters would produce no waste during operation. PV panels are in a solid and non-leachable state; broken PV panels would not be a source of pollution to stormwater.

The project would be required to comply with federal, state, and county laws, ordinances, and regulations; therefore, the project would result in less-than-significant impacts related to the creation of significant hazards through the routine transport, use, or disposal of hazardous materials.

- b) **Less than Significant Impact.** The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. With the exception of construction-related materials such as fuels, lubricants, adhesives, and solvents, the proposed project would not generate or require the use or storage of significant quantities of hazardous substances. The toxicity and potential release of these materials would depend on the quantity of material, type of storage container, safety protocols used on the site, location and/or proximity to residences, frequency and duration of spills or storage leaks, and the reactivity of hazardous substances with other materials. Therefore, a complete list of all materials used on-site, how the materials would be transported, and in what form they would be used would be recorded to maintain safety and prevent possible environmental contamination or worker exposure. Compliance with regulations and standard protocols during the storage, transportation, and usage of any hazardous materials would ensure no substantial impacts would occur. The PV panels used in the proposed project are environmentally sealed collections of PV cells that require no chemicals and produce no waste materials. There is no battery backup component, thus minimizing the need for transporting, using, or disposing of the hazardous materials that may be associated with the project. As such, there is a less-than significant impact associated with creating a significant hazard to the public or the environment.
- c) **No Impact.** There is no school located with ¼ mile of the project. The nearest school, Landers Elementary School, is located approximately 5 miles to the west. There would be no impact related to hazardous emissions or the handling of hazardous materials near schools resulting from implementation of the project.

- d) **No Impact.** The project site is not located on a known site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed project would not create a significant hazard to the public or the environment. Therefore, the project would result in a less than significant impact associated with hazardous materials sites.
- e) **No Impact.** The proposed project area is not located in the vicinity of any public or public use airport. The site is not within the boundaries of an airport land use plan. The nearest public or public use airport is the Twentynine Palms Airport, 24 miles to the southeast. The project would result in no safety hazards for people residing or working in the project area as a result of proximity to an airport.
- f) **No Impact.** The proposed project area is not located within the vicinity of a private airstrip; therefore, it would not result in a safety hazard for people residing or working in the project area. The nearest private airstrip is the Landers Airport, located approximately 3.25 miles to the northwest of the project site. There is no impact and no further analysis is warranted.
- g) **No Impact.** Activities associated with the proposed project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. The project would not result in any closures of existing roadways that might have an effect on emergency response or evacuation plans in the vicinity of the project site. In addition, all vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. Accordingly, implementation of the proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. There is no impact and no further analysis is warranted.
- h) **Less than Significant Impact.** The project site is not within an area of high or very high fire hazard, as determined by the SBCFD. However, any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires in the region. Although vegetation on the project site consists of native grasses and shrubs, species of non-native plants (noxious weeds) included on the weed list of the California Department of Food and Agriculture may occur in the project area. In addition to posing a major threat to biological resources, the spread of noxious weeds can result in increased fire frequency by providing sufficient fuel to carry fires. As a condition of project approval, the developer will comply with San Bernardino County weed abatement regulations (SBCC§ 23.031-23.043) and periodically clear the site of all non-complying vegetation, including weeds such as Russian thistle (tumbleweed, *Salsola tragus*), London rocket (*Sisymbrium itio*), redstem filaree (*Erodium cicutarium*), foxtail chess (*Bromus madritensis*), and cheatgrass (*Bromus tectorum*). The project will also conform to the requirements of the Safety Element of the General Plan and the applicable portions of the San Bernardino County Code (primarily Title 2, Division 3, "Fire Protection and Explosives and Hazardous Materials"). Through compliance with these standards, the risks associated with wildfires on the project site are reduced to below a level of significance. No further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
IX. HYDROLOGY AND WATER QUALITY - Will the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that will result in substantial erosion or siltation on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structure which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** Operation of the project would not require the regular use of water or produce any form of wastewater. Waste Discharge Requirements (issued by the Lahontan RWQCB) are not applicable to the project. The project would result in less-than-significant impacts related to the violation of any water quality standards. Further discussion on potential water quality impacts is provided in e), below.

- b) **Less than Significant Impact.** Water service will be provided by the Bighorn Desert View Water Agency and the project does not propose to utilize wells or groundwater supplies beneath the project site. Approximately 12 acre-feet of water is required during construction and annual operation requires approximately 0.35 acre-feet per year for occasional cleaning and maintenance of the solar facility. Since water consumption during construction is highly dependent on climatic conditions, the project has applied a safety factor of 1.5 to expected water requirements and applied for a water contract in excess of the required water usage at the site. The Bighorn Desert View Water Agency has generated a draft contract for board approval and a will serve letter will be generated prior to construction. Decommissioning of the facility will utilize approximately 5 acre-feet of water. Proposed annual water usage at the project site (0.25 acre-feet per year) is significantly less than annual water usage that would be required for development of the 15 residential lots (5-8 acre-feet per year) .

The solar generating facility will not alter existing grades and will only reduce the imperviousness of the site at specific locations that include inverter pads, pile locations for the array fields and access roads. The total area impacted is between 5 to 10 percent of the total project footprint. The hydrology report for the project site indicates that minimal (2-4 inch arch) at access road locations and SWPPP best management practices will minimize increased runoff and erosion while promoting infiltration at the project site,

Therefore, since the project would not use substantial amounts of groundwater or create large, impermeable surfaces, it would not cause depletion of groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Groundwater aquifer volume and recharge would not be significantly impacted by the implementation of the project.

- c) **Less than Significant Impact.** The project will not mass grade the site and grading will only occur at access road and inverter and switchgear foundation locations. Although Cajon soils have been identified to have a moderate potential for erosion, SWPPP measures and access roads around the perimeter of the site will promote infiltration at the project site and decrease the potential for erosion. A review of the site for jurisdictional drainages was completed as part of the BRA (Appendix B). No drainages were found to be present on the site. As described in the Preliminary Drainage Report (Appendix E), the project would not otherwise result in any noteworthy change in the drainage pattern of the site, with a negligible increase in imperviousness and no substantial structures modifying stormwater flows. The project would not result any substantial alteration to the drainage pattern of the site or area, nor would it cause any substantial erosion or siltation on- or off-site.
- d) **Less than Significant Impact.** As described in c.), above, the project would not impact any drainages, and the project would not otherwise result in any noteworthy change in the drainage pattern of the site, with a minor increase in imperviousness and no substantial structures modifying stormwater flows. The project not result any substantial alteration to the drainage pattern of the site or area, nor would it result in any substantial increase in runoff that could cause flooding on-or off- site.
- e&f) **Less than Significant Impact.** The project site is in a rural area with no developed storm drainage system. As calculated in the Preliminary Drainage Report, site imperviousness would increase only slightly and runoff from the site would not be expected to increase due

to facility design. Additionally, the project would not contain elements that would cause runoff to be polluted or otherwise degrade the quality of storm waters. The project would have a less than significant impact related to the capacity of storm drainage systems and the quality of waters leaving the site.

- g) **No Impact.** The proposed project is a solar energy generation facility, and would not include any housing. Therefore, there would be no impact related to the placement of housing within a FEMA-delineated 100-year flood zone. No further analysis is warranted.
- h) **No Impact.** The proposed project is in an unidentified FEMA flood zone and located on FEMA map number 06071C7425H. Based on the drainage report compiled by Ludwig Engineering Associates, Inc. (Appendix E), the Project structures do not have the potential to significantly impact existing runoff or existing flowlines.
- i) **Less than Significant Impact.** The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, because the project site is not within any identified path of a potential inundation flow that might result in the event of a dam or levee failure or that might occur from a river, stream, lake or sheet flow situation. There is no impact and no further analysis is warranted.
- j) **No Impact.** The project site would not be subject to inundation by seiche, tsunami, or mudflow. A tsunami is a series of ocean waves generated in the ocean by an impulsive disturbance. Due to the inland location of the proposed project, tsunamis are not considered a threat. A seiche is an oscillating surface wave in a restricted or enclosed body of water generated by ground motion, usually during an earthquake. Inundation from a seiche can occur if the wave overflows a containment wall or the banks of a water body. No impacts are expected to occur because the project is not adjacent to any marine or inland water bodies. The soils in the project area are well-drained, the terrain is relatively flat, and mudflows have not historically been an issue in the proposed project area. No further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
X. LAND USE AND PLANNING - Will the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

a) **Less than Significant Impact.** The project would not physically divide an established community, because the project is located in an unincorporated part of the County that has sparse residential development and would occupy an area that is currently vacant. The project would not create an impediment for residents in the project area. The project would prevent unauthorized crossing of the project site. All parcels in the vicinity of the site have legal access from other directions, and unauthorized crossing of the project site is therefore not required to guarantee access to local parcels. Therefore, there would be no impact related to the dividing of an established community. No further analysis is warranted.

b) **Less than Significant Impact.** The project site's land use zoning district is HV/RL-5. According to Development Code Section 82.04.040, electrical power generation is a conditionally permitted use in this district. Therefore, approval of the CUP included in the project application would allow the project to be consistent with its land use zoning designation.

There are no other applicable plans adopted for the purpose of avoiding or mitigating an environmental effect that govern land use at the site. There is a less than significant impact and no further analysis is warranted.

c) **No Impact.** The project area is within the boundaries of the West Mojave Plan. The West Mojave Plan is a federal land use plan amendment to the Bureau of Land Management's California Desert Conservation Area Plan that presents a comprehensive strategy to conserve and protect sensitive plants and animals and the natural communities of which they are a part. The West Mojave Plan is applicable only to Bureau of Land Management-administered public lands within the West Mojave Plan area. Although the study area is within the West Mojave Plan area, it is not encompassed within Bureau of Land Management lands; therefore, future development would not be subject to the requirements of the West Mojave Plan.

A West Mojave Habitat Conservation Plan for private lands is in preparation, and has not yet been approved by local or State agencies. Should the West Mojave Habitat Conservation Plan for development on private lands be adopted prior to implementation of the project, any future development would have to be consistent with its conditions.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XI. MINERAL RESOURCES - Will the project:				
a) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check ☐ if project is located within the Mineral Resource Zone Overlay):

a-b) **No Impact.** The State's Guidelines for Classification and Designation of Mineral Lands help implement the Surface Mining and Reclamation Act of 1975 by providing the State Geologist with direction in carrying out mineral resource classification of lands in California that are threatened by uses that will be incompatible with, or will preclude access to significant mineral resources. These guidelines describe how the State Mining and Geology Board (SMGB) may elect to designate mineral-bearing areas of statewide or regional significance.

The Mineral Lands Classification System is the process of identifying lands containing significant mineral deposits. Designation is the formal recognition by the SMGB, after consultation with lead agencies and other interested parties, of areas containing mineral deposits of regional or statewide significance. The objective of classification and designation processes is to ensure, through appropriate lead agency mineral resource management policies and procedures, that mineral deposits of statewide or of regional significance are available when needed. Classification is completed by the State Geologist in accordance with the SMGB's priority list, into Mineral Resource Zones (MRZ). Classification is based on geologic and economic factors without regard to existing land use and land ownership. Within the classifications, four major divisions on the diagram are "Areas of Identified Mineral Resource Significance," "Areas of Undetermined Mineral Resource Significance," "Areas of Unknown Mineral Resource Significance," and "Areas of No Mineral Resource Significance." The divisions between these major "knowledge" categories marks the divisions between areas classified MRZ-2, MRZ-3, MRZ-4, and MRZ-1; wherein lands classified MRZ-2 are areas that contain identified mineral resources, lands classified MRZ-3 are areas of undetermined mineral resource significance, lands classified MRZ-4 are areas of unknown mineral resource potential, and lands classified MRZ-1 are areas where geologic information indicates no significant mineral deposits are present.

The Department of Conservation, California Geological Survey (formerly the Division of Mines and Geology) has not included the Proposed Project within the Mineral Lands Classification System. The Proposed Project is not delineated in the General Plan, Specific Plan or other land use plan or being considered for designation by the SMGB; therefore, the Proposed Project would not result in the loss of availability of a known or locally

important mineral resource that would be of value to the region and the residents of the State.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XII. NOISE - Will the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):

- a) **Less than Significant Impact with Mitigation Incorporated.** Sensitive noise receptors in the vicinity of the project site include scattered residences. Without mitigation, noise generated from the proposed project could temporarily exceed standards established in the General Plan or Noise Ordinance, or applicable standards of other agencies. Specifically, construction of the proposed project may potentially create some elevated short-term construction noise impacts from construction equipment between the hours of 7 a.m. and 7 p.m. Section 83.01.080(g)(3) specifically exempts "temporary construction, maintenance, repair, or demolition activities" from County noise standards, when such activities occur between 7 a.m. and 7 p.m., excluding Sundays and federal holidays." With implementation of Mitigation Measure N-1, no significant impacts are anticipated. The mitigation measure ensures that noise generation from construction equipment/vehicle operation would be limited to daytime hours and would be localized, temporary, and transitory in nature. Construction-period impacts are therefore less than significant with the implementation of Mitigation Measure N-1.

Operation of the proposed project would not generate audible levels of noise or perceptible levels of vibration in the surrounding community. Onsite noises would be limited to small motors that rotate the PV panels on the single-axis tracking system, noise from inverters and pad-mounted transformers, and maintenance activities (including occasional cleaning, drive motor repair, tracker repair, electrical connection repair, and panel replacement). The

small motors used to rotate the panels would produce very low levels of noise, operate only during daylight, and be imperceptible from nearby residences. Similarly, the proposed inverters and pad-mounted transformers are small in scale and located over 800 feet from nearby residences, minimizing potential noise impacts. Maintenance activities would be infrequent and only during daylight hours. The project would not include dwellings or other development, nor would it have the potential to generate any significant number of additional vehicle trips after construction is completed.

Based on this analysis, it is concluded that the proposed project would not have a substantial adverse effect on noise during operations; impacts would be less than significant and no mitigation measures are required to reduce operational-period impacts.

- b) **Less than Significant Impact.** Groundborne vibration and groundborne noise could originate from earth movement during the construction phase of the proposed project as well as from the operation and maintenance of the facilities. Operation of the proposed project would introduce noise that would be associated with the moving parts of the tracker panels as well as general maintenance activities associated with the facility. Noise from these operational generators would be minimal in nature and would not create a significant noise impact within the surrounding area. The project would be expected to comply with all applicable requirements for long-term operation, as well as with measures to reduce excessive groundborne vibration and noise, to ensure that the project would not expose persons or structures to excessive groundborne vibration. Impacts would be less than significant.
- c) **Less than Significant Impact.** The proposed project would not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The project would result in temporary noise increases during construction but would not create any substantial permanent increase in the ambient noise levels. Operational-period activities would include the occasional use of vehicles and the use of equipment that produce minimal noise levels at site boundaries.

Inverters would be centrally located in the solar field. The final inverter design has not yet been determined; however, uncontrolled inverter noise is expected to be up to 61 dB at a distance of 10 meters (33 feet) from the inverters. Noise would only be produced by inverters during daytime hours, when the PV panels are producing electricity. Transformers would likely be located with the inverters. A typical inverter transformer in such an installation would be a 1,000 kilovolt ampere liquid-immersed distribution transformer, which would result in average sound levels of 58 decibel, A-weighted (dBA) at the source based on National Electrical Manufacturers Association requirements. While no specific transformer model has been selected, any transformer used onsite would follow the National Electrical Manufacturers Association requirements, resulting in an average sound level of 58 dBA. The combined noise level of each inverter and transformer pair would drop to below 55 dBA at 100 feet, a distance which is within project boundaries or within public rights-of-way. Therefore, the combined noise of the inverters and transformers would be well below the Development Code's standard for stationary noise sources in residential areas of 55 dBA between 7 a.m. and 10 p.m. and 45 dBA between 10 p.m. and 7 a.m. (Table 83-2). Because the inverters would not be operating outside of daytime hours, there would be virtually no operational noise during nighttime hours. Therefore, the project would not have a substantial adverse effect related to a substantial permanent increase in ambient noise levels and no mitigation measures are required.

- d) **Less than Significant Impact with Mitigation Incorporated.** Noise generated during the project's 4.5-month construction period could potentially result in some temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Specifically, construction of the proposed project may potentially create some elevated short-term construction noise impacts from construction equipment. Mitigation Measure N-1 would ensure that impacts are below a level of significance by limiting noise-generating activities to the hours of 7 a.m. to 7 p.m., requiring the muffling of construction equipment where feasible, and requiring that stationary construction equipment be placed in a manner so that emitted noise is directed away from sensitive receptors.

During operations, noise from the facility would occur periodically due to occasional maintenance activities, twice-annual washings, and periodic visits by security staff. These activities would produce limited amounts of noise from pickup trucks and other light vehicles; such impacts would be temporary. Additionally, operating vehicles would only be located at any single point on the site for a very limited duration. Maintenance, repair, and washing activities would occur exclusively during daylight hours.

Because these impacts are a result of temporary maintenance activities, and with implementation of Mitigation Measure N-1, which limits these temporary activities to the hours of 7 a.m. to 7 p.m., excluding Sundays and Federal holidays, they fall under the exemption provided by Section 83.01.080(g)(3) of the Development Code. Therefore, with implementation of Mitigation Measure N-1, temporary or periodic noise impacts would be less-than-significant.

- e) **No Impact.** The proposed project area is not located within the boundaries of an airport land use plan, and is not in the vicinity of a public or public use airport. The nearest public use airport is the Twentynine Palms Airport, located about 24 miles to the southeast of the project. Due to the distance of the airport from the project site, there would be no noise impacts from the airstrip on workers in the area.
- f) **No Impact.** The proposed project area is not located within the vicinity of a private airstrip. The nearest private airstrip is the Landers Airport, located approximately 3.25 miles to the northwest of the project site. Due to the distance of the airstrip from the project site, there would be no noise impacts from the airstrip on workers in the area.

SIGNIFICANCE: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

NOISE MITIGATION MEASURES:

N-1 ***Noise Mitigation.** The developer will submit for review and obtain approval of an agreement letter that stipulates that all construction contracts/subcontracts contain as a requirement that the following noise attenuation measures be implemented:*

- a) *Noise levels of any project use or activity will be maintained at or below adopted County noise standards (SBCC 83.01.080). The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.*
- b) *Exterior construction activities will be limited between 7 a.m. and 7 p.m. There will be no exterior construction activities on Sundays or National Holidays.*

- c) *Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible.*
- d) *All stationary construction equipment will be placed in a manner so that emitted noise is directed away from sensitive receptors nearest the project site.*

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XIII. POPULATION AND HOUSING - Will the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). Construction is anticipated to take approximately 4.5 months, with a peak workforce of 40 construction workers on the site. These workers are expected to commute to the site mostly from Yucca Valley, Joshua Tree or Twentynine Palms. There would be no permanent staffing onsite during operations. Accordingly, the proposed project would not result in any impacts to housing or related infrastructure, nor would it require construction of additional housing. The project would not result in a substantial adverse effect related to substantial population growth in the area, and no mitigation measures are required.
- b) **No Impact.** The proposed project would not displace existing housing. There would be no impact related to displacement of housing.
- c) **No Impact.** The proposed project would not displace local residents. There would be no impact related to the displacement of people.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
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XIV. PUBLIC SERVICES

- a) Will the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Fire – Less than Significant Impact.** The proposed project area is serviced by the SBCFD. The nearest fire station is Yucca Valley Station 42, located 5 miles to the southwest of the project site. This station houses one Type I Engine Company, one Water Tender, one modular ambulance, two reserve engines and two reserve ambulances. Homestead Valley/Landers Station 19, located 6.5 miles northwest of the project site, houses one Type III Engine Company and one Brush Patrol. The proposed project would not substantially impact service ratios, response times, or other performance objectives related to fire protection. However, during construction, some public services including fire protection may be required; these would be short-term requirements and would not require increases in the level of public service offered or affect the agency's response time. The project would incorporate perimeter and internal access driveway systems that are accessible to emergency equipment. Entry gates would incorporate knox locks or similar devices to allow 24-hour access for emergency responders.

Any development, along with the associated human activity, in previously undeveloped areas increases the potential of the occurrence of wildfires. Comprehensive safety measures that comply with federal, state, and local worker safety and fire protection codes and regulations would be implemented for the proposed project that would minimize the potential for fires to occur during project construction and operations. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed project would not result in significant impacts associated with fire protection.

Police Protection – Less than Significant Impact. The proposed project area and other Unincorporated portions of the County are served by the San Bernardino County Sheriff's Department. The proposed project would not impact service ratios, response times, or other performance objectives related to police protection. However, during construction, some public services including police protection may be required. These would be short-term requirements and would not require increases in the level of public service offered or

affect the agency's response times. In order to protect against theft and vandalism, the proposed project would employ its own security patrol crews to survey the project site during construction and operation of the project. Additionally, the project would incorporate security fencing and would be remotely monitored.

Schools – No Impact. Long-term operation of the proposed facilities would place no demand on school services because it would not involve the construction of facilities that require such services and would not involve the introduction of a temporary or permanent human population into this area. There would be no impact on schools and no further analysis is warranted.

Parks – No Impact. Long-term operation of the proposed facilities would place no demand on parks because it would not involve the construction of housing and would not involve the introduction of a temporary or permanent human population into this area. There would be no impact on parks and no further analysis is warranted.

Other Public Facilities – No Impact. The proposed project would not result in an increased resident population or a significant increase in the local workforce. Based on these factors, the proposed project would not result in any long-term impacts to other public facilities and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XV. RECREATION				
a) Will the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **No Impact.** The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No new residences or recreational facilities would be constructed as part of the proposed project and the proposed project would not induce population growth in adjacent areas. No significant adverse impacts on recreation would result from implementation of the project and no further analysis is warranted.
- b) **No Impact.** The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. No new residences or recreational facilities would be constructed as part of the proposed project. The proposed project would not induce population growth in adjacent areas and would not increase the use of recreational facilities in surrounding neighborhoods. No significant adverse impacts on recreation would result from implementation of the project and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XVI. TRANSPORTATION/TRAFFIC – Will the project.				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and greenways, pedestrian and bicycle paths, and mass transit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact.** A Trip Generation Analysis was prepared for the project by Northern Energy and Power in April 2014 (see Appendix F). The Trip Generation Analysis reveals that the proposed project would not result in any decline in the performance of the area's circulation system. During construction, a maximum of 70 passenger car equivalent roundtrips per day would occur, including a combination of passenger vehicles and large trucks. This number of trips would have a minimal impact on access routes to the project site, including SR-247 and Reche Road. During operations, the project would be unmanned and would generate less than one roundtrip per day for security and maintenance purposes.

Due to the rural nature of the project area, alternative means of transportation, including mass transit and pedestrian and bicycle routes, are generally unavailable, and would therefore not be negatively impacted by the project. Because the site would be unmanned, there would be no increase in demand for alternative means of transportation.

Therefore, the proposed project would not conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. No significant adverse impacts on transportation or traffic would result from implementation of the project and no further analysis is warranted.

- b) **Less than Significant Impact.** As noted under impact a), above, the Trip Generation Analysis prepared for the project reveals that the proposed project would not result in any decline in the performance of the area's circulation system during the operational period. Because the construction period is of limited duration and construction workers and delivery trucks would travel to and from the site outside of peak hours, this impact is less than significant. The proposed project would therefore not conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

The proposed project would result in a less-than-significant increase in traffic in relation to the existing traffic load and capacity of the street system. At the initiation of project construction, equipment that may include water trucks, backhoes, and loaders would be mobilized to the project site using Reche Road. This equipment would then be stored onsite for the duration of construction and used as construction progresses. During operations, the project would be unmanned and would generate very few trips per week for security and maintenance purposes. Based on these facts, no significant adverse impacts on transportation or traffic would result from implementation of the project and no further analysis is warranted.

- c) **No Impact.** The proposed project would not affect air traffic patterns. The project site is not within the vicinity of any airport. The only substantial aboveground modifications would be solar panels and switchgear. The switchyard will include transformers and metering and telecommunications equipment between 6-10 feet in height. SCE equipment in the switchyard will include four power poles between 30-45 feet in height, 25 kV wiring/conductors, and remote automatic reclosers located near the top of the poles.

Potential impacts associated with reflectivity and glare are discussed in Section I, above. Based on the analysis provided in Section I, the project would result in less-than-significant impacts related to glare. Therefore, no significant adverse impacts on air traffic patterns would result from implementation of the project and no further analysis is warranted.

- d) **No Impact.** The proposed project would not include design features that could affect traffic safety, nor would it cause incompatible uses to be present on local roads. Project gates would be inset in accordance with County design standards to prevent vehicle stacking into public roads. No new road dedications are proposed as part of this project, and no significant increase in traffic is projected during project construction or operations. Bowman Trail will be paved from Reche Road to the project entrance. Road closure along Bowman Trail during construction of road improvements would be temporary and would not increase hazards. Therefore, no significant adverse impacts related to roadway design features or incompatible uses would result from implementation of the project and no further analysis is warranted.

- e) **No Impact.** The proposed project would not result in inadequate emergency access to the project area. During project construction, public roads would remain open and available for use by emergency vehicles and other traffic. The proposed project would result in a one-

lane roadway closure along Bowman Trail during construction of road improvements. The one-lane closure would be temporary and would not significantly impact emergency access to the area. The project site would provide emergency access paths as approved by the SBCFD. The site's entry gate would be equipped with Knox locks or similar devices to permit emergency responders to enter the site 24 hours per day. Perimeter and internal drives would be included to allow access to all points within the project site.

- f) **No Impact.** Due to the rural nature of the project area, no significant public transit, bicycle, or pedestrian facilities presently exist or are planned for implementation in the vicinity of the project site. No alternative transportation policies, plans, or programs have been designated for the proposed project area. Because the project would be unmanned during operations, project implementation would not result in an increase in demand or decline in performance for public transit, bicycle, or pedestrian facilities in the region. Therefore, the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. No significant adverse impacts would result from implementation of the project and no further analysis is warranted.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less than Significant with Mitigation Incorporated</i>	<i>Less than Significant</i>	<i>No Impact</i>
XVII. UTILITIES AND SERVICE SYSTEMS - Will the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded, entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>SUBSTANTIATION:</i>				

- a) **No Impact.** The proposed project would not exceed wastewater treatment requirements of the Lahontan RWQCB. During construction, wastewater would be contained within portable toilet facilities and disposed of at an approved site. No employees would be permanently stationed at the site, and no permanent restrooms are planned. The project would discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used. The County General Plan defers to applicable RWQCB water control requirements, and the proposed project's water discharge does not require treatment or permitting according to the regulations of the Lahontan RWQCB.
- b) **No Impact.** The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Approximately 12 acre-feet of water is required during construction and annual operation requires approximately 0.35 acre-feet per year for occasional cleaning of the solar panels. Decommissioning of the facility will utilize approximately 5 acre-feet of water. The Bighorn Desert View Water Agency has generated a draft contract for board approval and a will-serve letter will be generated prior to construction. Because the site would not contain a

permanent workforce, no toilet facilities would be required and there would be no demand for wastewater service.

- c) **No Impact.** The proposed project would not require the construction or expansion of stormwater drainage facilities. The proposed project would discharge uncontaminated water that is used to clean the panels, with no toxicants or cleaning agents used, onto the ground. The insubstantial quantity of discharged water generated by cleaning (0.35 acre-feet) would evaporate or be absorbed into the soils onsite.
- d) **No Impact.** Construction would each require 12 acre-feet of water and decommissioning activities are expected to utilize 5 acre-feet of water. It is expected that 0.35 acre-feet of water would be required to wash the panels each year. Water would be obtained from a fire hydrant adjacent to the project site and delivered with a water truck. The project would not be served by a direct connection to any water system, or by an on-site well. Because of the negligible water supply requirements for the project there is no need for new or expanded water supply entitlements.
- e) **No Impact.** The proposed project would not require or result in the construction of new wastewater treatment facilities or the expansion of existing wastewater treatment facilities. Accordingly, no impacts are anticipated from implementation of the proposed project.
- f) **Less than Significant Impact.** Less than significant impacts related to landfill capacity are anticipated from the proposed project. A Construction Waste Management Plan would be submitted to the Solid Waste Management Division for approval prior to project construction. The proposed project largely consists of short-term construction activities (with short-term waste generation limited to minor quantities of construction debris) and would not result in long-term solid waste generation. Solid wastes associated with the proposed project would be disposed of as appropriate in local landfills or at a recycling facility. The nearest active landfill is the Landers Landfill, located 1.6 miles southwest of the project site.

The panels and tracking system would eventually need to be disposed of during the decommissioning process. A Decommissioning Plan would be prepared to address equipment removal, recycling, land revegetation, the total cost of decommissioning the project, and site closure and reclamation. The applicant will be required to provide the County with a financial guarantee (i.e. parental guarantee, letter of credit, bond, or other) for the cost of decommissioning.

Most parts of the proposed PV system are recyclable. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not counting the motors and control systems) typically consist of aluminum and concrete. All of these materials can be recycled. Concrete from deconstruction would be recycled through local recyclers. Metal and scrap equipment and parts that do not have free flowing oil would be sent for salvage. Equipment containing any free flowing oil would be managed as hazardous waste and be evaluated before disposal at a properly-permitted disposal facility. Oil and lubricants removed from equipment would be managed as used oil and disposed in accordance with applicable State hazardous waste disposal requirements.

- g) **Less than Significant Impact.** The proposed project would comply with all federal, state and local statutes and regulations related to solid waste. The project would consist of short-term construction activities (with short-term waste generation limited to minor quantities of

construction debris) and thus would not result in long-term solid waste generation. Solid wastes produced during the construction phase of this project, or during future decommission activity would be disposed of in accordance with all applicable statutes and regulations. A Construction Waste Management Plan will be submitted to the Solid Waste Management Division for approval prior to project construction. Additionally, a Decommissioning Plan would be prepared and a surety bond for the cost of decommissioning would be provided to the County. Accordingly, anticipated impacts from the proposed project related to landfill capacity are less than significant.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a) **Less than Significant Impact with Mitigation Incorporated.** As discussed in Section IV, above, without mitigation, the project could result in significant impacts to burrowing owl and nesting bird species. These species are commonly found throughout the region, including in preserved habitat areas and protected open space covering hundreds of thousands of acres. Mitigation Measures BIO-1 through BIO-5 are incorporated to reduce biological impacts on the project site to below a level of significance. With the implementation of these mitigation measures, implementation of the proposed project would not degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.
- b) **Less than Significant Impact.** Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The *CEQA Guidelines*, Section 15130 (a) and (b), states:

- (a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.*
- (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.*

There are currently no significant projects in the entitlement process or under development within the vicinity of the project site. Cumulative impacts would therefore be less than significant.

- c) **Less than Significant Impact.** As described in Sections I through XVII, above, prior to mitigation, the project has potentially significant impacts in the areas of aesthetics, air quality, biological resources, cultural resources, and noise. With the implementation of the mitigation measures provided in this Initial Study, these impacts are reduced to below a level of significance. There are no project impacts which remain significant and unavoidable following implementation of mitigation measures. In addition, for environmental issue areas that were not found to be significantly impacted by the project and therefore do not include mitigation measures, the implementation of project design features and County policies, standards, and guidelines would ensure that there would be no substantial adverse effects on human beings, either directly or indirectly.

Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

XVIII. MITIGATION MEASURES:

(Any mitigation measures which are not “self-monitoring” will have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval. Condition compliance will be verified by existing procedure [CCRF].)

AESTHETICS

AES-1 *Lighting Requirements.* *The area of illumination from any lighting will be confined to within the site boundaries to minimize impacts to night sky views from surrounding properties. On-site lighting will be fully shielded, diffused, or directed in a manner to avoid glare directed at adjacent properties, roadways or any light spill into any wildland areas surrounding the site that might affect nocturnal animals. No light will project onto adjacent roadways in a manner that interferes with on-coming traffic. All lighting will be limited to that necessary for maintenance activities, security, and safety purposes. All signs proposed by this project will only be lit by steady, stationary, shielded light directed at the sign, by light inside the sign or by direct stationary neon lighting.*

AIR QUALITY

AQ-1 *AQ/Operational Mitigation.* *Operation of all off-road and on-road diesel vehicles/equipment will comply with the County Diesel Exhaust Control Measures [SBCC §83.01.040 (c)], including but not limited to:*

- a) Equipment/vehicles will not be left idling for periods in excess of five minutes.*
- b) Engines will be maintained in good working order to reduce emissions.*
- c) Onsite electrical power connections will be made available where feasible.*
- d) Ultra low-sulfur diesel fuel will be utilized.*
- e) Electric and gasoline powered equipment will be substituted for diesel powered equipment where feasible.*
- f) Signs will be posted requiring all vehicle drivers and equipment operators to turn off engines when not in use.*
- g) All transportation refrigeration units will be provided electric connections.*

AQ-2 *AQ/Dust Control Plan.* *The applicant will prepare, submit, and obtain approval from San Bernardino County Planning of a DCP consistent with MDAQMD guidelines and a letter agreeing to include in any construction contracts/subcontracts a requirement that project contractors adhere to the requirements of the DCP. The DCP will include the following elements to reduce dust production:*

- a) *Exposed soils and haul roads will be watered three (3) times per day to reduce fugitive dust during all grading/construction activities. Inactive areas will be treated with soil stabilizers such as hay bales, non-toxic soil binder, or aggregate cover.*
- b) *Street sweeping will be conducted when visible soil accumulations occur along site access roadways to remove dirt dropped by construction vehicles.*
- c) *Site access driveways and adjacent streets will be washed daily, if there are visible signs of any dirt track-out at the conclusion of any workday.*
- d) *Construction vehicle tires will be washed prior to leaving the project site.*
- e) *All trucks hauling dirt away from the site will be covered, and speeds on unpaved roads will be reduced below 15 miles per hour.*
- f) *During high wind conditions (i.e., wind speeds exceeding 25 mph), areas with disturbed soil will be watered hourly and activities on unpaved surfaces will cease until wind speeds no longer exceed 25 mph.*
- g) *Storage piles that are to be left in place for more than three working days will either be sprayed with a non-toxic soil binder, covered with plastic or revegetated.*

AQ-3 AQ – Installation. *The developer will submit for review and obtain approval from County Planning of evidence that all air quality mitigation measures have been installed properly and that specified performance objectives are being met to the satisfaction of County Planning and County Building and Safety.*

BIOLOGICAL RESOURCES

BIO-1 Worker Environmental Awareness Program: *Prior to the start of construction activities, the Applicant shall prepare and implement a WEAP for site construction works. This program shall include information specific to protected or special-status species which could potentially be impacted by the project, including Desert Tortoise and burrowing owl. The WEAP will summarize the general rules and procedures that must be followed by each person on the Project to assure the minimization or complete avoidance of impacts to protected biological resources and special status species.*

BIO-2 Desert Tortoise Mitigation – Pre-Construction Surveys. *Prior to ground disturbance, the Applicant will retain a qualified biologist to conduct desert tortoise surveys within the area to be disturbed. The results of the surveys, including graphics showing the locations of any desert tortoise detected and any avoidance measures required, will be submitted to the County of San Bernardino within 14 days following completion of the surveys.*

If desert tortoise are detected, the Applicant shall prepare a mitigation plan for the avoidance of take, which will be submitted for review to the County of San Bernardino prior to implementation.

If desert tortoise are not detected during pre-construction surveys, the Applicant shall install desert tortoise exclusion fencing, per the USFWS published

guidelines, around the site to prevent tortoise from entering the project site during construction activities.

BIO-3 Desert Tortoise Mitigation – On and Off-site Raven Management Plan *In order to offset direct impacts from development projects with the potential to increase raven populations (and decrease desert tortoise populations), the applicant shall develop an on-site raven management plan. This plan is to eliminate and/or minimize the availability of subsidies (i.e. food, water, nest sites), and the potential for ravens to occupy the site during all phases of development and use, including construction, operation, maintenance, and decommissioning. The applicant shall also contribute to the regional raven management plan, which the National Fish and Wildlife Foundation manages. For projects with 30-year durations, the contribution to the regional plan is \$105 per acre impacted. The total contribution includes acreage associated with substations and transmission lines.*

BIO-4 Burrowing Owl Mitigation – Pre-Construction Surveys. *Within 14 days prior to ground disturbance, the Applicant will retain a qualified biologist to conduct burrowing owl surveys within the area to be disturbed. The survey will be performed by walking parallel transects spaced no more than 20 meters apart, and will be focused on detecting burrows that are occupied, or are suitable for occupation, by the burrowing owl. The results of the surveys, including graphics showing the locations of any active burrows detected and any avoidance measures required, will be submitted to the County of San Bernardino within 14 days following completion of the surveys. If active burrows are detected, the following take avoidance measures will be implemented:*

- If burrowing owls are observed using burrows on-site during the non-breeding season (September through January, unless determined otherwise by a qualified biologist based on field observations in the region), occupied burrows will be left undisturbed, and a burrowing owl habitat management plan shall be created (see below).*
- If avoiding disturbance of owls and owl burrows on-site is infeasible, owls will be excluded from all active burrows through the use of exclusion devices placed in occupied burrows in accordance with protocols established in CDFW's Staff Report on Burrowing Owl Mitigation (2012). Specifically, exclusion devices, utilizing one-way doors, will be installed in the entrance of all active burrows. The devices will be left in the burrows for at least 48 hours to ensure that all owls have been excluded from the burrows. Each of the burrows will then be excavated by hand and/or mechanically and refilled to prevent reoccupation. Exclusion will continue until the owls have been successfully excluded from the disturbance area, as determined by a qualified biologist.*
- Any active burrowing owl burrows detected on-site during the breeding season (February through August, unless determined otherwise by a qualified biologist based on field observations in the region), will not be disturbed and a burrowing owl habitat management plan shall be created (see below). To the maximum extent practicable, a buffer zone from occupied nests should be*

maintained during physical ground disturbing activities. Once nesting has ended, the buffer may be removed.

BIO-5 Burrowing Owl Mitigation – Management Plan. *In the event that pre-construction surveys indicate the presence of burrowing owl within the project site, the applicant shall prepare a habitat management plan for the burrowing owl prior to issuance of a grading permit. The plan will include provisions for the avoidance of take, and for the protection of foraging habitat and replacement of any active burrows from which owls may be passively evicted as allowed by Mitigation Measure BIO-1. At a minimum, the plan will include the following elements:*

- If occupied burrows are to be removed, the plan will contain schematic diagrams of artificial burrow designs and a map of potential artificial burrow locations that would compensate for the burrows removed.*
- All active on-site burrows excavated as described in Mitigation Measure BIO-1 will be replaced with suitable natural or artificial burrows within the preservation areas approved by the County of San Bernardino.*
- Measures prohibiting the use of rodenticides during the construction process if any active on-site burrows are identified.*
- The plan will ensure that adequate suitable burrowing owl foraging habitat is provided in proximity to natural or artificial burrows within off-site mitigation areas.*
- The Burrowing Owl Management Plan will be submitted to the County of San Bernardino for review prior to issuance of a grading permit for the Project, if such plan is deemed necessary based upon the results of pre-construction surveys.*

BIO-6 Nesting Bird Mitigation – Pre-Construction Surveys. *Within 30 days prior to vegetation clearing or ground disturbance associated with construction or grading that would occur during the nesting/breeding season (February through August, unless determined otherwise by a qualified biologist based on observations in the region), the Applicant will retain a qualified biologist to determine if active nests of species protected by the Migratory Bird Treaty Act or the California Fish and Game Code are present within or adjacent to the disturbance zone or within 100 feet (300 feet for raptors) of the disturbance zone. The surveys will be conducted no more than seven days prior to initiation of disturbance work within active project areas. If ground disturbance activities are delayed, then additional pre-disturbance surveys will be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. If ground disturbance will be phased across the project site, pre-disturbance surveys may also be phased to conform to the development schedule.*

If active nests are found, clearing and construction within 100 feet of the nest (or a lesser distance if approved by the County of San Bernardino) will be postponed or halted, until the nest is vacated and juveniles have fledged, as determined by the biologist. Avoidance buffers will be established in the field with highly visible construction fencing or flagging, and construction personnel will be instructed on the sensitivity of nest areas. A qualified biologist will serve as a construction

monitor during those periods when construction activities will occur near active nests to ensure that no inadvertent impacts on these nests occur.

The results of pre-construction nesting bird surveys, including graphics showing the locations of any nests detected, and documentation of any avoidance measures taken, will be submitted to the County of San Bernardino within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

CULTURAL RESOURCES

- CR-1 Construction Monitoring – Reche Road.** A qualified archaeological monitor shall be present during earthmoving activities proposed within the Reche Road frontage. The monitor shall be empowered to temporarily halt or redirect construction work in the vicinity of any find until the project archeologist can evaluate it. In the event of a new find, salvage excavation and reporting may be required.
- CR-2 Resource Evaluation and Disposition.** If archaeological resources are encountered during implementation of the project, ground-disturbing activities will be temporarily redirected from the vicinity of the find, and the archeologist shall be contacted to assess the nature and significance of the find. The archaeologist shall have the authority to temporarily divert or redirect grading or excavation activities in the vicinity in order to make an evaluation of the find and determine appropriate treatment that may include the development and implementation of a data recovery investigation or preservation in place. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS SBAIC at the San Bernardino County Museum in Redlands, California. The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS-SBAIC. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The Applicant, in consultation with the Lead Agency and archaeologist, will designate repositories in the event that resources are recovered.
- CR-3 Human Remains.** If human remains are encountered unexpectedly during construction excavations and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance will occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then help determine what course of action will be taken in dealing with the remains. The landowner will then undertake additional steps as necessary in accordance with CEQA Guidelines Section 15064.5(e) and PRC Section 5097.98.

NOISE

N-1 Noise Mitigation. *The developer will submit for review and obtain approval of an agreement letter that stipulates that all construction contracts/subcontracts contain as a requirement that the following noise attenuation measures be implemented:*

- a) Noise levels of any project use or activity will be maintained at or below adopted County noise standards (SBCC 83.01.080). The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.*
- b) Exterior construction activities will be limited between 7 a.m. and 7 p.m. There will be no exterior construction activities on Sundays or National Holidays.*
- c) Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible.*
- d) All stationary construction equipment will be placed in a manner so that emitted noise is directed away from sensitive receptors nearest the project site.*

GENERAL REFERENCES

- California Department of Conservation. (2011). *San Bernardino County Important Farmland 2010*. Map. Farmland Mapping and Monitoring Program. Available at <http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx>
- California Department of Fish and Wildlife. (2014). California Wildlife Habitat Relationships Life History Accounts and Range Maps. Available at <http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx>
- CEQA Guidelines, Appendix G.
- County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 Development Code*. Amended August 21, 2014. Available at <http://cms.sbcounty.gov/lus/Planning/DevelopmentCode.aspx>
- County of San Bernardino. (2007, March 13). *County of San Bernardino 2007 General Plan*. Amended April 24, 2014. http://www.co.san-bernardino.ca.us/landuseservices/general_plan/Default.asp.
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- County of San Bernardino Identified Hazardous Materials Waste Sites List, April 1998. County of San Bernardino, Countywide Integrated Waste Management Plan, March 1995.
- U.S. Department of Homeland Security, Federal Emergency Management Agency. Flood Insurance Rate Map No. 06071C7425H (unprinted panel). Available at <http://msc.fema.gov>.

PROJECT-SPECIFIC REFERENCES

- BCR Consulting. (2014, July 9). Cultural Resources Assessment. Bowman Solar Project.
- McAlister Geoscience. (2014, June 9). Phase I Environmental Site Assessment Report.
- Ludwig Engineering Associates (2014, April 24) Preliminary Drainage Report
- NOREAS. (2014, April). General Biological Resources Assessment. Bowman Solar Project
- NOREAS. (2014, April). Preconstruction Plant Inspection. Bowman Solar Project
- NOREAS. (2014, June). Burrowing Owl Survey. Bowman Solar Project
- NOREAS. (2014, June). Desert Tortoise Survey Report. Bowman Solar Project
- NOREAS. (2014, June). Focused Rare Plant Survey. Bowman Solar Project
- Northern Energy and Power (2014, July 28) Construction Management Plan
- Pacific Coast Land Consulting (2013, February) Draft Engineering Geologic Investigation

LIST OF APPENDICES

Appendix A Bowman Solar Photo Simulations

Appendix B Biological Studies

Bowman Solar Biological Resource Assessment

Bowman Solar Plant Inspection

Bowman Solar Rare Plant Survey

Bowman Solar Burrowing Owl Survey

Bowman Solar Desert Tortoise Survey

Appendix C Cultural Resources Assessment

Appendix D Geotechnical Investigation

Appendix E Preliminary Drainage Report

Appendix F Traffic Trip Generation Analysis

