

United States Department of the Interior  
Bureau of Land Management

# Desert Sunlight Solar Farm Project California Desert Conservation Area Plan Amendment and Final Environmental Impact Statement

For the  
Palm Springs – South Coast Field Office  
Palm Springs, California

April 2011  
CACA #48649



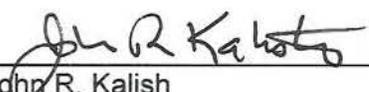
United States Department of the Interior  
Bureau of Land Management

**Desert Sunlight Solar Farm Project California  
Desert Conservation Area Plan Amendment  
and Final Environmental Impact Statement**

For the

**Palm Springs – South Coast Field Office**  
Palm Springs, California

**April 2011**

  
\_\_\_\_\_  
John R. Kalish  
Field Manager

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Date April 4, 2011

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# United States Department of the Interior



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In reply refer to:  
1610-670.36  
2800/ CACA 048649

April 15, 2011

Dear Reader:

Enclosed is the Proposed Resource Management Plan-Amendment/Final Environmental Impact Statement (PA/FEIS) for the California Desert Conservation Area (CDCA) Plan and Desert Sunlight Solar Farm (DSSF) Project. The Bureau of Land Management (BLM) prepared the PA/FEIS in consultation with cooperating agencies, taking into account public comments received during the National Environmental Policy Act (NEPA) process. The proposed decision on the plan amendment would add the DSSF site to those identified in the current CDCA Plan, as amended, for solar energy production. The proposed decision on the PA is whether to add the DSSF site to those identified in the CDCA Plan, as amended, for solar energy production. The proposed decision on the DSSF is whether to approve the issuance of the right-of-way grant applied for by Desert Sunlight Holdings, LLC.

This PA/FEIS for the DSSF has been developed in accordance with NEPA and the Federal Land Policy and Management Act of 1976. The PA is largely based on the preferred alternative in the Draft Resource Management Plan-Amendment/Draft Environmental Impact Statement (DRMP-A/DEIS), which was released on August 27, 2010. The PA/FEIS for the DSSF contains the proposed plan and project decisions, a summary of changes made between the DRMP-A/DEIS and PRMP-A/FEIS, an analysis of the impacts of the decisions, a summary of written comments received during the public review period for the DRMP-A/DEIS and responses to comments.

Pursuant to BLM's planning regulations at 43 Code of Federal Regulations (CFR) 1610.5-2, any person who participated in the planning process for the PA and has an interest that is or may be adversely affected by that planning decision may protest approval of that planning decision within 30 days from the date the Environmental Protection Agency (EPA) publishes its notice of availability for the PA/FEIS in the *Federal Register*. For further information on filing a protest, please see the accompanying protest regulations in the pages that follow (Attachment 1). The regulations specify the required elements in a protest. Protesting parties should take care to document all relevant facts and, as much as possible, reference or cite the planning documents or available planning records (e.g., meeting minutes or summaries, correspondence, etc.). To aid in ensuring the completeness of the protest, a protest checklist is attached to this letter (labeled as Attachment 2).

All protests must be in writing and mailed to one of the following addresses:

Regular Mail:  
Director (210)  
Attention: Brenda Hudgens-Williams  
BLM Protest Coordinator

Overnight Mail or Other Delivery:  
Director (210)  
Attention: Brenda Hudgens-Williams  
BLM Protest Coordinator

P.O. Box 66538  
Washington, D.C. 20035

1620 L Street, N.W., Suite 1075  
Washington, D.C. 20036

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Emailed and faxed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular or overnight mail postmarked by the close of the protest period. Under these conditions, the BLM will consider the emailed or faxed protest as an advance copy and will afford it full consideration. If you wish to provide the BLM with such advance notification, please direct faxed protests to the attention of Brenda Hudgens-Williams - BLM Protest Expeditor at 202-912-7129, and emailed protests to [Brenda\\_Hudgens-Williams@blm.gov](mailto:Brenda_Hudgens-Williams@blm.gov).

The BLM Director will make every attempt to promptly render a decision on each valid protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the BLM Director shall be the final decision of the Department of the Interior. Responses to protest issues will be compiled in a Director's Protest Resolution Report that will be made available to the public following issuance of the decisions.

Upon resolution of all protests, the BLM may issue a Record of Decision (ROD) adopting the Approved PA and making a decision regarding issuance of the right-of-way grant for the DSSF. Copies of the ROD will be mailed or made available electronically to all who participated in this NEPA process and will be available to all parties through the "Planning" page of the BLM national website (<http://www.blm.gov/planning>), or by mail upon request.

Unlike the PA decision, issuance of the proposed right-of-way grant decision is an implementation decision that is not subject to protest under the BLM planning regulations. Rather, once the BLM resolves the protests to the land use plan decision and issues the ROD, the right-of-way decision(s) may be appealed to the Interior Board of Land Appeals pursuant to 43 CFR Part 4, Subpart E, or challenged in federal district court.

Sincerely,



John R. Kalish  
Field Manager

*Attachment 1*

**Protest Regulations**

[CITE: 43CFR1610.5-2]

TITLE 43--PUBLIC LANDS: INTERIOR  
CHAPTER II--BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR  
PART 1600--PLANNING, PROGRAMMING, BUDGETING--Table of Contents  
Subpart 1610--Resource Management Planning  
Sec. 1610.5-2 Protest procedures.

- (a) Any person who participated in the planning process and has an interest which is or may be adversely affected by the approval or amendment of a resource management plan may protest such approval or amendment. A protest may raise only those issues which were submitted for the record during the planning process.
- (1) The protest shall be in writing and shall be filed with the Director. The protest shall be filed within 30 days of the date the Environmental Protection Agency published the notice of receipt of the final environmental impact statement containing the plan or amendment in the Federal Register. For an amendment not requiring the preparation of an environmental impact statement, the protest shall be filed within 30 days of the publication of the notice of its effective date.
- (2) The protest shall contain:
- (i) The name, mailing address, telephone number and interest of the person filing the protest;
  - (ii) A statement of the issue or issues being protested;
  - (iii) A statement of the part or parts of the plan or amendment being protested;
  - (iv) A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
  - (v) A concise statement explaining why the State Director's decision is believed to be wrong.
- (3) The Director shall promptly render a decision on the protest.
- (b) The decision shall be in writing and shall set forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be the final decision of the Department of the Interior.

## **Resource Management Plan Protest Critical Item Checklist**

**The following items *must* be included to constitute a valid protest  
whether using this optional format, or a narrative letter.**

**(43 CFR 1610.5-2)**

BLM's practice is to make comments, including names and home addresses of respondents, available for public review. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment--including your personal identifying information--may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations and businesses, will be available for public inspection in their entirety.

**Resource Management Plan (RMP) or Amendment (RMPA) being protested:**

**Name:**

**Address:**

**Phone Number: ( )**

**Your interest in filing this protest (how will you be adversely affected by the approval or amendment of this plan?):**

**Issue or issues being protested:**

**Statement of the part or parts of the plan being protested:**

**Attach copies of all documents addressing the issue(s) that were submitted during the planning process by the protesting party, OR an indication of the date the issue(s) were discussed for the record.**

**Date(s):**

**A concise statement explaining why the State Director's decision is believed to be wrong:**

**Palm Springs South Coast Field Office**  
**Desert Sunlight Solar Farm Project California Desert Conservation Area Plan Amendment**  
**and Final Environmental Impact Statement**

Lead Agency: Bureau of Land Management (BLM)  
Palm Springs / South Coast Field Office (PSSCFO)  
Palm Springs, California

For further information, contact:  
Allison Shaffer, Project Manager PSSCFO -  
1201 Bird Center Drive, Palm Springs, CA 92262

**Abstract**

This Plan Amendment/Final Environmental Impact Statement (PA/FEIS) addresses the possible United States Bureau of Land Management (BLM) approval of an amendment to the *California Desert Conservation Area Plan* (CDCA Plan) to allow for solar energy and of a right-of-way (ROW) grant to lease land managed by the BLM for construction, operation and decommissioning of a solar photovoltaic energy generation facility. The Agency Preferred Alternative covers approximately 4,176 acres (ac), managed by the BLM, and would generate 550 megawatts (MW) of electricity annually. The PA/FEIS identifies impacts of the Agency Preferred Alternative, including impacts related to biological resources, cultural resources, land use, visual resources, hydrology, water quality, and water use. Many of these adverse impacts can be avoided or substantially reduced based on compliance with applicable laws, ordinances, regulations and standards, and compliance with measures provided in this PA/FEIS.

Chapter 2.0 discusses the Desert Sunlight Solar Farm Project (DSSF) (550 MW on approximately 4,176 ac), a reconfigured 550 MW Alternative (550 MW on approximately 4,110 ac), a reduced footprint 550 MW Alternative (550 MW on approximately 3,303 ac), the No Action Alternative (No ROW Grant and No CDCA Plan Amendment), the No Project Alternative (No ROW Grant and Amend the CDCA Plan for No Solar), and the No Project Alternative (No ROW Grant and Amend the CDCA Plan for Other Solar). Chapter 3.0 describes the existing conditions on and in the vicinity of the project site. Chapter 4.0 describes the potential adverse environmental impacts expected under each of the Alternatives, including the Agency Preferred Alternative.

The Field Manager of the PSSCFO has the authority for site management of future activities related to the ROW grant and is the BLM Authorized Officer for this FEIS.

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## **APPENDICES**

### Appendix

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## EXECUTIVE SUMMARY

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### ES.1 INTRODUCTION

*This Final Environmental Impact Statement (EIS) incorporates revisions since the Draft EIS was published as a result of input from community members, regulatory agencies and other stakeholders, and minor changes in the Project design by the Applicant. These revisions are shown as italicized and underlined text in this Final EIS. The Bureau of Land Management (BLM) has concluded that these revisions would not significantly increase, and in some situations would decrease, Project impacts as compared with the impacts described in the Draft EIS.*

The Applicant, Desert Sunlight Holdings, LLC (Sunlight), proposes to construct and operate a 550-megawatt (MW) solar photovoltaic (PV) energy-generating project known as the Desert Sunlight Solar Farm (DSSF). The PV generating facility (Solar Farm), most of the corridor for the Project's 220-kilovolt (kV) generation interconnection line (Gen-Tie Line), and one of two potential sites being considered for a new substation would be located on lands administered by the US Department of Interior (DOI), BLM, Palm Springs-South Coast Field Office. The Project includes development of a new 500- to 220- (500/220-) kV substation (referred to herein as the Red Bluff Substation), where the PV generating facility would interconnect with the Southern California Edison (SCE) regional transmission system. While the Red Bluff Substation is included as part of the Project for planning and environmental considerations, it would be constructed, owned, and operated by SCE, not the Applicant.

Because the Project would be located primarily on lands administered by the BLM, the Applicant filed a right-of-way (ROW) grant application with the BLM for a permit to construct and operate the Project (Case File Number CACA #48649). The decision regarding the issuance of the ROW grant will be based in part on an evaluation of the Project's potential environmental effects through the environmental review process under the National Environmental Policy Act of 1969 (NEPA) and the requirements of the Federal Land Policy and Management Act of 1976 (FLPMA).

In compliance with NEPA, the BLM prepared this Final EIS to inform the public about the proposed Project and to meet the needs of federal, state, and local permitting agencies in considering the Project. BLM authorization of a ROW grant for the Project would require a resource management land use plan amendment (PA) to the California Desert Conservation Area (CDCA) Plan (BLM 1980), as amended.

The California Public Utilities Commission (CPUC) has discretionary authority to issue a Permit to Construct (PTC) for SCE's proposed Red Bluff Substation, evaluated herein as a portion of the Project. *Because portions of the Project's alternative Gen-Tie Line routes would cross unincorporated privately owned land, Metropolitan Water District (MWD) owned land, and/or County of Riverside, California (Riverside County) owned land within the jurisdiction of Riverside County, the County has the authority to issue a Public Use Permit for the Project. Additionally, Riverside County has the authority to issue an Encroachment Permit for access to the County road ROW.* As allowed by the California Environmental Quality Act (CEQA) Guidelines Section 15221, the *CPUC and Riverside County* intend to use this EIS to provide the environmental review required for *their respective approvals of the relevant portions of the Project.*

## ES.2 PURPOSE AND NEED

Sunlight applied to the BLM for a ROW grant on federal public land to develop the Solar Farm, the Gen-Tie Line route, and the Red Bluff Substation. Sunlight also applied to the Department of Energy (DOE) for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, PL 111-5 (the Recovery Act). This section discusses the BLM's and DOE's purpose and need for the Proposed Action, as required by NEPA, Sunlight's objectives in proposing the Proposed Action, and CEQA project objectives for the Red Bluff Substation.

### ***BLM Purpose and Need***

The BLM's purpose and need for the Proposed Action is to respond to Sunlight's application under Title V of the FLPMA (43 USC 1761) for a ROW grant to construct, operate, maintain, and decommission a utility-scale 550-MW PV solar energy facility (Solar Farm), Gen-Tie Line, and a 500/220-kV substation on public lands, in compliance with FLPMA, BLM ROW regulations, and other applicable federal laws. The BLM will decide whether to approve, approve with modifications, or deny issuance of a ROW grant to Sunlight for the proposed DSSF Project and the related assignment of any ROW grant for the substation to SCE. Concurrently, the BLM also will consider amending the CDCA Plan of 1980, as amended. The CDCA, while recognizing the potential compatibility of solar generation facilities on public lands, requires that all sites associated with power generation or transmission not identified in that plan be considered through the land use plan amendment process. If it decides to approve the issuance of a ROW grant, the BLM also will amend the CDCA as required.

In conjunction with FLPMA, the BLM's applicable authorities include the following:

- Executive Order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the production and transmission of energy in a safe and environmentally sound manner.
- *Section 211* of the Energy Policy Act of 2005 (EPAct 2005), which *states that "the Secretary of the Interior should ... seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity."*
- Secretarial Order 3285A1, Renewable Energy Development by the DOI, dated February 22, 2010. This Secretarial Order establishes the development of renewable energy as a priority for the DOI and creates a Departmental Task Force on Energy and Climate Change. It also announced a policy goal of identifying and prioritizing specific locations (study areas) best suited for large-scale production of solar energy.

### ***DOE Purpose and Need***

DOE is a cooperating agency on this EIS, in accordance with a memorandum of understanding between the DOE and BLM, signed in January 2010. DOE's purpose and need for agency action is to comply with its mandate under EPAct 2005 by selecting eligible projects that meet the goals of the act. DOE's proposed action is to issue a loan guarantee for this Project under Title XVII of the EPAct 2005, as amended by the Recovery Act, which requires that construction for the Project commence by September 30, 2011.

DOE's purpose and need for the agency action is based on federal laws addressing the financing and promotion of renewable energy projects and need for immediate economic stimulus. The EAct 2005 established a federal loan guarantee program within DOE for eligible energy projects. Title XVII of EAct 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic [human-caused] emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the US at the time the guarantee is issued." The two principal goals of the loan guarantee program are to encourage commercial use in the US of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. EAct 2005 was amended by the Recovery Act to create Section 1705, authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects that begin construction before September 30, 2011. The primary purposes of the Recovery Act are job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and state and local fiscal stabilization. The Section 1705 Program is designed to address the current economic conditions of the nation, in part, through renewable energy, transmission and leading edge biofuels projects.

### ***Applicant's Objectives for the Proposed Action***

Sunlight's fundamental objectives for the DSSF Project are as follows:

- Construct, operate, and eventually decommission a 550-MW PV energy facility and associated interconnection infrastructure; and
- Facilitate SCE's construction and operation of a substation in order to provide renewable electric power to California's transmission grid. This is to help meet federal and state renewable energy supply and greenhouse gas (GHG) emissions reduction requirements.

Sunlight is committed to constructing and operating the Project in an environmentally responsible manner and to providing a sustainable source of renewable energy to the state's investor-owned utilities and the public.

### ***CEQA Project Objectives***

SCE proposes to construct the Red Bluff Substation in response to interconnection requests from Desert Sunlight Holdings LLC as part of the Large Generator Interconnection Process (LGIP). CEQA Guidelines, Section 15124(b), requires a statement of project objectives, which are as follows for the Red Bluff Substation:

- Respond to interconnection requests as part of the LGIP from generators in the Desert Center area by constructing a substation to interconnect with the Devers Palo Verde (DPV) 500-kV transmission line;
- Provide safe and reliable electrical service consistent with the North American Electric Reliability Corporation, Federal Energy Regulatory Commission, California Independent System Operator, and SCE's planning design guidelines and criteria;
- Meet project need, while minimizing environmental impacts; and
- Meet project need in accordance with the Large Generation Interconnection Agreement.

**ES.3 PROPOSED ACTION AND ALTERNATIVES**

The Project area is a largely vacant, undeveloped, and relatively flat area in the Chuckwalla Valley of the Sonoran Desert in eastern Riverside County. The area proposed for the DSSF is approximately six miles north of Interstate 10 (I-10) and the rural community of Desert Center and four miles north of Lake Tamarisk, between the cities of Coachella to the west and Blythe to the east. The Project area contains transmission lines, telephone lines, pipelines, and dirt roads. Joshua Tree National Park is north, east, and west of the area; at its closest point, the DSSF site is approximately 1.4 miles southwest of the national park boundary. The inactive Eagle Mountain Mine is approximately one mile west of the Project Study Area. The areas being considered for the Red Bluff Substation are seven to eight miles southeast or southwest (depending on the site) of the DSSF site, just south of I-10.

Alternatives considered in the EIS were evaluated as a result of the Applicant working with the BLM on evaluating and selecting Project locations, issues identified by the BLM, and comments received during the public scoping process. The BLM is required to consider in detail a range of alternatives that are considered “reasonable,” usually defined as alternatives that are realistic (not speculative), that are technologically and economically feasible, and that respond to the purpose of and need for the Proposed Action. Similarly, CEQA requires a “reasonable range” of alternatives that are feasible and that satisfy most of the Project sponsor’s objectives. For this EIS, the alternatives provided satisfy requirements under both NEPA and CEQA.

Three full action alternatives (Alternatives 1, 2, and 3), one No Action Alternative (Alternative 4), and two No Project Alternatives (Alternatives 5 and 6) are fully analyzed in the EIS. Each of the action alternatives would require an amendment to the CDCA Plan, as would the two No Project Alternatives.

Each action alternative consists of three main components associated with generating and delivering electricity:

- DSSF Site (the main PV generating facility);
- 220-kV Gen-Tie (interconnection) Line; and
- 500/220-kV Substation (Red Bluff Substation) and supporting facilities, including a separate telecommunications site (the Desert Center Telecommunications Site) and an electric distribution line to the substation.

In addition, the determination of the suitability of the Project application area for solar development would be made as part of the plan amendment process.

Multiple alternatives were considered for each component. For the DSSF, two alternative layouts were analyzed: Solar Farm Layout B and Solar Farm Layout C. For the Gen-Tie Line, three alternative routes were analyzed: two that exit the DSSF and go to Substation A (identified as GT-A-1 and GT-A-2) and one that exits the DSSF and goes to Substation B (identified as GT-B-2). For the Red Bluff Substation, two alternative locations were analyzed: Substation A (to the east) and Substation B (to the west). In addition, there are two access road alternatives considered for Substation A only.

### **Alternatives Considered in Detail**

The following alternatives are described in detail in Section 2.2.4 and are fully analyzed in the EIS. Table ES-1 provides a comparison summary of the permanent footprint for the three action alternatives.

**Table ES-1**  
**Comparison Summary of Permanent Ground Disturbance<sup>1</sup> for**  
**Action Alternatives 1, 2, and 3 (in Acres)**

<b>Project Component/Element</b>	<b>Alternative 1: Proposed Action</b>	<b>Alternative 2: Alternate Action</b>	<b>Alternative 3: Reduced Solar Farm Footprint Alternative</b>
<b>Project Power Output</b>	<b>550 MW</b>	<b>550 MW</b>	<b>314 MW</b>
Solar Farm Layout B (2)	<u>3,912</u>	<u>3,912</u>	-
Solar Farm Layout C (2)	-	-	3,045
Gen-Tie Line A-1 (3a)	<u>92</u>	-	-
Gen-Tie Line A-2 (3b)	-	-	<u>86</u>
Gen-Tie Line B-2 (3c)	-	<u>68</u>	-
Red Bluff Substation A	<u>76</u>	-	<u>76</u>
Red Bluff Substation-related features	-	-	-
- Drainage/Sideslopes	<u>14</u>	-	<u>14</u>
- Access Road (4a)	<u>31</u>	-	<u>31</u>
- Transmission System (5)	<u>33</u>	-	<u>33</u>
- Distribution Line	8	-	8
- <u>Material Yard/Staging Area</u>	<u>9</u>	-	<u>9</u>
- Telecom Site (6)	<1	-	<1
Red Bluff Substation B	-	<u>76</u>	-
Red Bluff Substation-related features	-	-	-
- Drainage/Sideslopes	-	<u>20</u>	-
- Access Road (4b)	-	1	-
- Transmission System (5)	-	<u>22</u>	-
- Distribution Line	-	<1	-
- <u>Material Yard/Staging Area</u>	-	<u>10</u>	-
- Telecom Site (6)	-	<1	-
<b>TOTAL ACREAGE</b>	<b><u>4,176</u></b>	<b><u>4,110</u></b>	<b><u>3,303</u></b>

**Notes:** (1) All ground disturbing impacts previously identified in the Draft EIS as temporary impacts are now considered permanent impacts, per CDFG guidance, due to the long time period for natural revegetation to occur in the desert.

(2) Includes area for all DSSF-related facilities.

*(3a) Permanent disturbance of 92 acres occurs within the ROW corridor totaling 256 acres (12.1 miles long by 160 feet wide with additional fan-shaped areas at corners for stringing).*

*(3b) Permanent disturbance of 68 acres occurs within a corridor totaling 203 acres (10 miles long by 160 feet wide plus additional fan-shaped areas at corners for stringing).*

*(3c) Permanent disturbance of 86 acres occurs within a corridor totaling 226 acres (10.5 miles long by 160 feet wide plus additional fan-shaped areas at corners for stringing).*

(4a) Assume 24,000-foot by 30-foot-wide road from Kaiser Road for Alternative 1 and 24,000 by 30-foot-wide road from Chuckwalla Valley Road/Corn Springs Road for Alternative 2, although acreage amount allows for additional disturbance for adequate engineering and unknown site constraints.

(4b) Assume 2,000-foot by 18-foot-wide road from Eagle Mountain Road.

(5) Includes transmission system associated with connecting Red Bluff Substation to Gen-Tie Line and DPV1.

(6) New Desert Center Communications Site.

### ***Alternative 1—Proposed Action Alternative with Land Use Plan Amendment***

With the Proposed Action Alternative, the following configurations of the three Project components are proposed, resulting in approximately 4,176 acres of permanent disturbance:

- Solar Farm Layout B (SF-B);
- Gen-Tie Line A-1 (GT-A-1); and
- Red Bluff Substation A, with Access Road 2.

Solar Farm Layout B is six miles north of the Desert Center and four miles north of Lake Tamarisk, northeast of and next to Kaiser Road, and southwest of Pinto Wash. SF-B encompasses approximately 3,912 acres entirely on BLM-administered land. Access would be provided by Kaiser Road. Once fully operational, it would produce 550 MW of power.

GT-A-1 exits the southwest of the DSSF, runs south along the west side of Kaiser Road, turns east just north of Desert Center, and then runs south across I-10 to the eastern location being considered for the Red Bluff Substation (Red Bluff Substation A). The 160-foot-wide Gen-Tie corridor and additional fan-shaped areas at corners used for wire stringing for GT-A-1 would encompass approximately 256 acres, although permanent disturbance within this corridor would be 92 acres. The total length of GT-A-1 is approximately 12.1 miles. Of the 12-mile ROW, approximately 11.4 miles would be on BLM land and approximately 0.6 mile would be on land owned in fee by the Metropolitan Water District of Southern California. For the Gen-Tie Line, the Applicant proposes to use steel monopoles, which are expected to be approximately 135 feet tall. Typical spacing between structures would be approximately 900 to 1,100 feet.

Red Bluff Substation A would be on approximately 76 acres of BLM-administered land, approximately four miles southeast of California State Route 177, just south of I-10. The substation would be constructed within the central portion of the parcel. Other substation-related Project elements would require an additional 96 acres. These elements include drainage features, access road, electrical distribution line, transmission system loop-in, material yard/staging area, and a telecommunications site.

### ***Alternative 2—Alternate Action Alternative with Land Use Plan Amendment***

With the Alternate Action Alternative, the following configurations of the three Project components are proposed, resulting in approximately 4,110 acres of permanent disturbance:

- Solar Farm Layout B (SF-B);
- Gen-Tie Line B-2 (GT-B-2); and
- Red Bluff Substation B.

Solar Farm B is as described for Alternative 1.

GT-B-2 would exit the southwest corner of the Solar Farm site, would run south along the west side of Kaiser Road, then would turn southwest, approximately 1.2 miles north of Desert Center. Then it would travel across Eagle Mountain Road, finally turning south across I-10 to the western location that is being considered for the Red Bluff Substation (Red Bluff Substation B). The 160-foot-wide Gen-Tie corridor and additional fan-shaped areas at corners used for wire stringing would

encompass approximately 203 acres, although permanent disturbance within this corridor would be 68 acres. The total length of GT-B-2 would be approximately 10 miles. Of the 10-mile ROW, approximately 9.4 miles would be on BLM land and approximately 0.6 mile would be on land owned in fee by the Metropolitan Water District of Southern California. The poles used for the Gen-Tie Line would be the same as those described for Alternative 1.

Red Bluff Substation B would be within a 160-acre parcel of private land south of I-10 at Eagle Mountain Road. This substation is expected to require approximately 76 acres and would be generally located in the center of the parcel. Other substation-related Project elements would require an additional 54 acres. Because this substation site is on a parcel of privately owned land, it would be need to be acquired and subsequently owned by SCE.

***Alternative 3—Reduced Solar Farm Footprint Alternative with Land Use Plan Amendment***

With the Reduced Solar Farm Footprint Alternative, the following configurations of the three Project components are proposed, resulting in approximately 3,303 acres of permanent disturbance:

- Solar Farm Layout C (SF-C);
- Gen-Tie Line A-2 (GT-A-2); and
- Red Bluff Substation A, with Access Road 2.

SF-C would be in the same general location as SF-B but would be smaller to reduce overall environmental impacts, particularly on the desert tortoise. The acreage required for this layout would be 3,045 acres, and the power output would be 413 MW. The construction schedule would be 26 months, the same as for SF-B.

GT-A-2 would exit the southwest corner of the DSSF would run for approximately 4,400 feet along the east side of Kaiser Road, until it intersects with the ROW of an existing SCE transmission line. Then it would run to the southeast, along the existing transmission ROW, for approximately 7.2 miles then would turn south for approximately 0.6 mile. Then it would continue due west for approximately 0.5 mile, finally turning south cross I-10 and would continue approximately 1,000 feet (not along any existing feature) to Red Bluff Substation A. The GT-A-2 160-foot-wide Gen-Tie corridor and additional fan-shaped areas at corners used for wire stringing would encompass approximately 226 acres, although permanent disturbance within this corridor would be 86 acres. The total length of GT-A-2 is approximately 10.5 miles. Of the 10.5-mile ROW, 6.5 miles would be on BLM land and 4.0 miles would be on private land. For the portions on private land, 21 separate parcels would be crossed.

Red Bluff Substation A is as described for Alternative 1.

***Alternative 4 – No Issuance of a Right-of-Way Grant and No Land Use Plan Amendment (No Action)***

With this No Action Alternative, the Project would not be approved (all components of the Project would be denied), no ROW grant would be issued to the Applicant, and no CDCA Plan amendment would be approved that would make the land available for large-scale solar development.

***Alternative 5 – No Issuance of a Right-of-Way Grant with Land Use Plan Amendment to Identify the Area as Unsuitable for Solar Development (No Project with Plan Amendment)***

With this No Project Alternative, the Project would not be approved (all components of the Project would be denied), no ROW grant would be issued to the Applicant, and the CDCA Plan would be amended to identify the Project area as unsuitable for future large-scale solar energy development.

***Alternative 6 – No Issuance of a Right-of-Way Grant with Land Use Plan Amendment to Identify the Area as Suitable for Solar Development (No Project with Plan Amendment)***

Under this No Project Alternative, the Project would not be approved (all components of the Project would be denied), no ROW grant would be issued to the Applicant, and the CDCA Plan would be amended to identify the Project area as suitable for future large-scale solar energy development.

**Features Common to all Action Alternatives**

Features common to all action alternatives, regardless of the particular layout or route selected, are summarized below.

The DSSF, where the power would be generated, would encompass up to 3,912 acres, consisting of the following components:

- Main generation area, which includes PV arrays, combining switchgear, overhead lines, and access corridors;
- Operations and Maintenance (O&M) Facility;
- Solar Energy Visitors Center;
- On-site substation (where the voltage of the DSSF-generated electricity would be stepped up to 220 kV, which is the voltage of the Gen-Tie Line); and
- Site security and fencing.

The Gen-Tie Line would transmit the electricity generated at the DSSF to the regional transmission system, through the Red Bluff Substation where the power from the DSSF would feed into the SCE's existing Devers Palo Verde 1 (DPV1) 500-kV transmission line. The Gen-Tie Line would be up to 12.1 miles long, encompassing up to 256 acres. For the Gen-Tie Line, the Applicant plans to use steel monopoles 135 feet high and approximately 900 to 1,100 feet apart.

The 500/220-kV Red Bluff Substation would be on approximately 76 acres, with up to an additional 96 acres of permanent disturbance needed for related features, access roads, and drainage control. It would interconnect the power from the DSSF (through the Gen-Tie Line) to SCE's DPV1 transmission line, which passes next to the two substation sites evaluated in this EIS. Substation features are as follows:

- Transmission lines to connect the substation to the DPV1 line;
- Connection of the PV Project's Gen-Tie Line into the substation;
- Modification of some DPV1 towers near the substation;
- Construction of an electric distribution line for substation light and power;

- Installation of telecommunications facilities associated with the Project and the substation;
- Construction of drainage control features outside (but next to) the substation footprint; and
- Construction of new or improvements to existing access roads.

### **Project Implementation for Action Alternatives**

#### ***Project Construction***

The construction of the Project would begin once all applicable approvals and permits have been obtained. Project construction is expected to take approximately 26 months from the beginning of the construction process to completion of construction of the DSSF, the Gen-Tie Line, and Red Bluff Substation. The substation would be constructed on a schedule that allows interconnection and partial energization of the DSSF before Project construction is complete.

#### ***Operation and Facility Maintenance***

The DSSF is designed to have essentially no moving parts, no thermal cycle, and no water use for electricity generation or PV module cleaning. After completion of the construction phase of the Project, the only water used would be for domestic purposes (drinking, washing, flushing toilets) in the on-site facilities, including the O&M Facility and the Visitors Center. This simple Project design would require only limited maintenance throughout its lifetime.

Operation and maintenance of the proposed Project Gen-Tie Line would involve periodic inspection via helicopter or truck. The interconnection lines would be maintained on an as-needed basis and would include maintenance of access roads and erosion/drainage control structures.

The Red Bluff Substation would be unstaffed, and electrical equipment would be remotely monitored. SCE personnel would visit the substation three to four times per month for routine maintenance, which would include equipment testing, monitoring, and repair.

#### ***Project Decommissioning***

The DSSF has a minimum expected lifetime of 30 years, with an opportunity for a lifetime of 50 years or more with equipment replacement and repowering. When the Project concludes operations, much of the wire, steel, and modules that make up the system would be recycled to the extent feasible. The Project components would be deconstructed and recycled or disposed of safely, and the DSSF site could be converted to other uses, in accordance with applicable land use regulations in effect at the time of closure. Consistent with BLM and NEPA requirements, a detailed Decommissioning and Reclamation Plan would be developed to protect public health and safety and to be environmentally acceptable.

#### ***Project Modifications Since Publication of the Draft EIS***

*Since the Project's Draft EIS was published, the Applicant has made various minor changes in the Project design that are included in this Final EIS. These changes have been made for such reasons as improving efficiency; reducing costs; avoiding and minimizing environmental impacts; and incorporating input from regulatory agencies, community members, and other stakeholders. The BLM has concluded that these revisions to the Project would not significantly increase, and in some situations would decrease, impacts compared with the impacts described in the Draft EIS.*

The Project modifications include:

Solar Farm Site and Gen-Tie Line

- A revised layout of Solar Farm facilities that reduces the footprint for Solar Farm Layout B from approximately 4,245 acres to approximately 3,912 acres while achieving the same 550-MW generating capacity. Figure ES-1 shows the change in the footprint.
- A revised construction approach involving the use of innovative site preparation techniques that reduce the required volume of earth movement, including: (1) a “disc and roll” technique that uses farm tractors to till the soil over much of the Solar Farm site and then roll it level, and (2) “micrograding” or “isolated cut and fill and roll” of other areas of the site to trim off high spots and use the material to fill in low spots. These techniques minimize the area of the Solar Farm site where conventional cut and fill grading will occur.
- A modified approach to supplying water during construction for dust control and soil preparation throughout the Solar Farm site. The modified approach involves use of several temporary construction ponds for water storage at various locations around the site.
- Modification of the Gen-Tie Line poles from a delta to a vertical configuration to provide the opportunity to co-locate transmission lines for possible additional projects in the area.

Red Bluff Substation

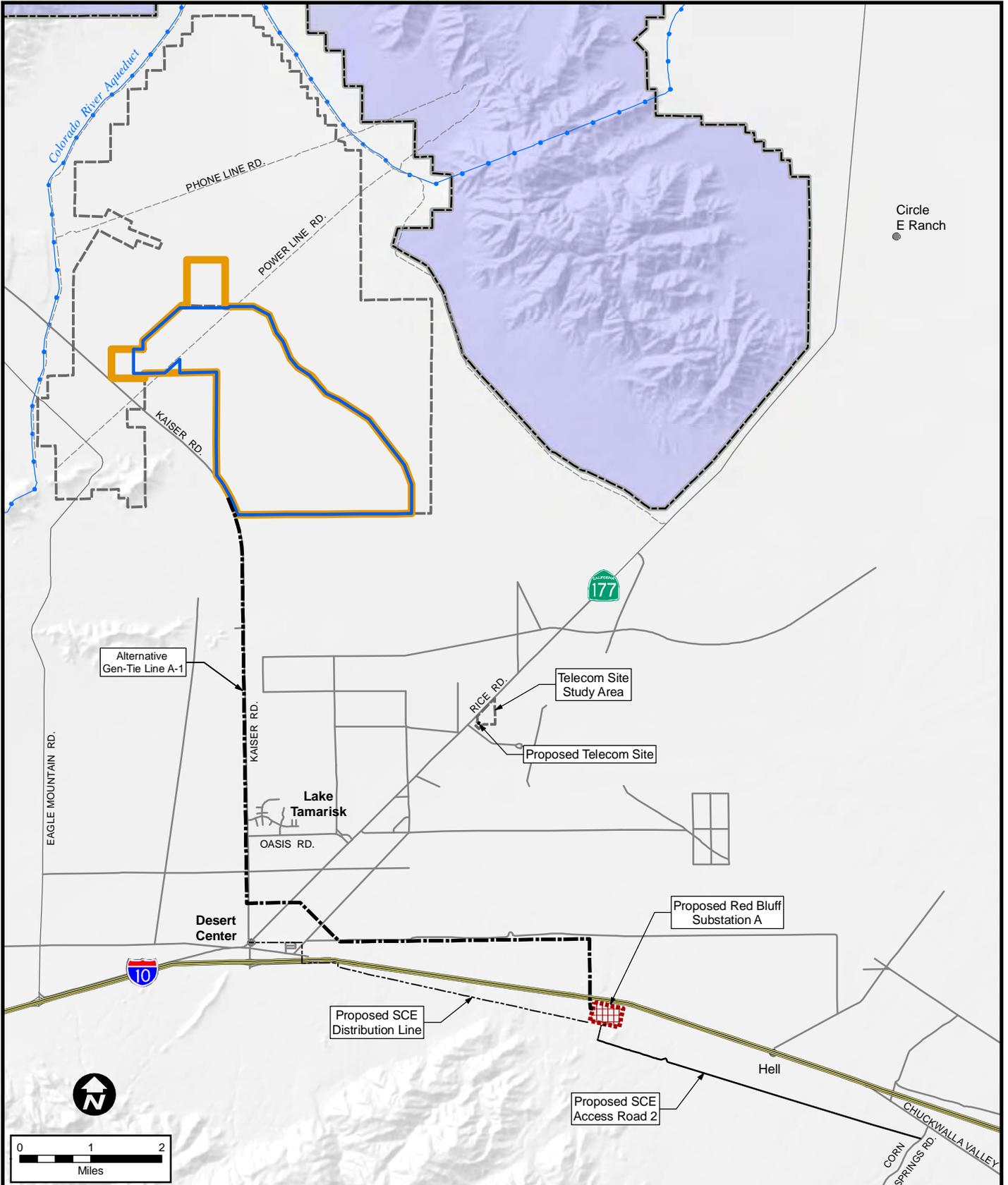
- An emergency diesel powered generator for a back-up power source.
- A well to provide dust control during construction and to serve a septic system for periodic operational visits by employees.
- A septic system and restroom for employees during operational activities.
- A material yard/staging area adjacent to the substation footprint.

The Project modifications, noted above, are incorporated into the action alternatives and reflected in the text, tables, and figures in Chapters 2, 3 and 4, unless otherwise indicated.

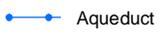
**Alternatives Considered but Eliminated from Further Analysis**

Alternatives not carried forward did not meet Project purpose and need or Project objectives, were deemed to be technically disadvantageous, or had greater environmental impacts than the currently proposed Project alternatives. These alternatives were considered but eliminated from further analysis:

- Larger Project within the Project Study Area;
- Direct Desert Tortoise Avoidance Alternative within the Project Study Area;
- Private Land in the Chuckwalla Valley;
- Contaminated Sites Near the Devers-Palo Verde Corridor;
- Alternative BLM Land;
- Alternate Nonrenewable Power Generating Technologies;
- Concentrating Solar Power Technologies;



**LEGEND**

-  Proposed Gen-Tie Line A-1
-  SCE Access Road
-  SCE Distribution Line
-  Study Area Boundary for Solar Farm
-  Solar Farm B Footprint in DEIS
-  Solar Farm B Footprint in FEIS
-  Red Bluff Substation (Alternative A)
-  Joshua Tree National Park Boundary
-  Aqueduct

Source: First Solar.



**DESERT SUNLIGHT SOLAR FARM**

**Figure ES-1**  
**Modification of**  
**Solar Farm Layout B**

- Wind Energy;
- Alternative Transmission and Interconnection Locations;
- Distributed and Rooftop Photovoltaics; *and*
- *Underground installation of Gen-Tie Lines.*

#### **ES.4 PUBLIC AND AGENCY COORDINATION**

The BLM, DOE, and California Public Utilities Commission rely on the public to help identify key issues, to suggest a range of alternatives and appropriate mitigation, and to comment on the environmental analysis.

##### ***Public Scoping Process and Summary***

The BLM published a Notice of Intent (NOI) to prepare an EIS on January 13, 2010, in the *Federal Register*, Volume 75, Number 8. Publication of the NOI began a 30-day comment period that ended February 12, 2010. The BLM established a Web site, with Project information describing the various methods for providing public comment on the Project and including an e-mail address where comments could be sent electronically. (Refer to Section 5.3.2 for the Web site and e-mail addresses.)

Notification for a public scoping meeting, held on January 28, 2010, was posted on the BLM's Web site and was e-mailed to the local newspaper, *The Desert Sun*, on January 13, 2010. In addition, notices were sent by certified mail to responsible and trustee agencies under CEQA, to all landowners within 300 feet of the Project boundary, and to other interested parties.

A public scoping meeting was held on January 28, 2010, at the University of Riverside Palm Desert Graduate Center, 75-080 Frank Sinatra Drive, Palm Desert, California. Sunlight made a presentation describing the Project, and the BLM made presentations describing the environmental review process. Twenty-two people wrote their names on a voluntary sign-in sheet.

Fourteen comment letters were received during the scoping comment period that ended on February 12, 2010. Comments were received on the following categories: purpose and need, alternatives development, air resources (air sheds), water resources (surface and groundwater), biological resources (vegetation and wildlife), cultural resources, visual resources, land use and special designations, public health and safety, noise and vibration, recreation, socioeconomics, environmental justice, and cumulative impacts. Comments received during scoping are addressed in the analysis of impacts in this EIS.

##### ***Public Outreach Activities***

First Solar has engaged in additional public outreach for the Desert Sunlight Project in order to further promote public participation in the development plans for the Project. These activities include meetings held with individuals and groups commenting on the Project, additional workshops held in the local community providing direct access for the community to ask questions and comment on the Project, and discussions with local, state, and federal government officials and meetings with individual groups. Based on these discussions, First Solar conducted additional environmental studies to help further assess potential environmental effects of the Project, considered additional alternatives to provide a greater range of reasonable alternatives for the

Project, and adjusted the Project alternative boundaries to lessen the potential environmental impacts of the Project. Information collected or developed as a result of these meetings was provided to the BLM and has been incorporated into this document.

### **Agency Coordination**

Federal, state, and local permits and approvals would be required before construction and operation of the Project, or any action alternative, could proceed. A list of the major permits, approvals, and consultations required is presented in the EIS. The Applicants (Sunlight and SCE) would be responsible for obtaining all permits and approvals required to implement any authorized activities.

Federal agencies requiring permits for one or more Project components are the following:

- BLM;
- DOE; and
- US Fish and Wildlife Service.

State agencies requiring permits for one or more Project components are as follows:

- California Department of Fish and Game;
- Regional Water Quality Control Board;
- California Independent System Operator;
- California Public Utilities Commission;
- California Department of Transportation;
- South Coast Air Quality Management District; and
- Native American Heritage Commission.

Local agencies requiring permits for one or more Project components are as follows:

- Riverside County; and
- Metropolitan Water District of Southern California.

## **ES.5 SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

The analysis contained in this EIS indicates that the potential environmental effects from implementation of the proposed Project (or one of the other action alternatives) would result in adverse effects, although most can be reduced with mitigation. However, the impacts on air resources, cultural resources, and visual resources cannot be reduced to less than significant and are unavoidable.

Table ES-2 provides a summary of impacts by alternative; Table ES-3 provides a summary of all measures identified by Sunlight or SCE, measures required by law, regulation, or policy, and additional measures identified by the BLM.

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**Table ES-2  
Summary of Project Impacts by Alternative**

<b>Resource</b>	<b>Alternative 1 Proposed Action Alternative</b>	<b>Alternative 2 Alternate Action Alternative</b>	<b>Alternative 3 Reduced Footprint Alternative</b>	<b>Alternative 4 No Action (No ROW Grant, No PA)</b>	<b>Alternative 5 No Action: ROW Grant, PA to Exclude Solar</b>	<b>Alternative 6 No Action: No ROW Grant, PA to Allow Solar</b>
<b>3.2/4.2 Air Resources</b>						
	<i>Construction:</i> Construction activities and associated vehicle traffic would generate emissions of criteria pollutants and hazardous air pollutants. Daily construction-related emissions for SF-B would exceed SCAQMD regional emissions significance thresholds for reactive organic compounds, nitrogen oxides, carbon monoxide, PM10, and PM2.5.	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Operational emissions would involve vehicle travel by Solar Farm employees or other employees conducting periodic inspections or maintenance activity along the Gen-Tie Line or at the Red Bluff Substation. Emissions would be minor.	Same as Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Emissions would be comparable in type and magnitude, but likely lower than, the construction emissions.	Same as Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.3/4.3 Vegetation</b>						
	<i>Construction:</i> Permanent removal of 4,066 acres of creosote bush scrub, 96 acres of desert dry wash woodland, 6 special status plant species, and 297 acres of jurisdictional resources (includes desert dry wash woodland).	Permanent removal of 4,005 acres of creosote bush scrub, 93 acres of desert dry wash woodland, 5 special status plant species, and 290 acres of jurisdictional resources (includes desert dry wash woodland).	Permanent removal of 3,174 acres of creosote bush scrub, 97 acres of desert dry wash woodland, 6 special status plant species, and 197 acres of jurisdictional resources (includes desert dry wash woodland).	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Changes in the site's geomorphic conditions and site hydrology could adversely affect hydrology and water quality of desert dry wash woodland and jurisdictional resources located downstream of site. Maintenance of access roads has potential to introduce dust and invasive species into areas immediately adjacent to the site.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Decommissioning activities have potential to introduce dust and invasive species into areas immediately adjacent to the site.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.4/4.4 Wildlife</b>						
	<i>Construction:</i> Construction would result in permanent habitat loss for wildlife, including special status wildlife and breeding and foraging habitat for non-special status species. Construction would also result in the permanent disturbance of 190 acres of the Chuckwalla DWMA and 187 acres of the Chuckwalla desert tortoise CHU. Trash and debris generated by construction activities could attract predators of desert tortoise, common ravens, to the site.	Similar to Proposed Action. Fewer acres of Chuckwalla DWMA (56 acres) and Chuckwalla CHU (139 acres) would be affected.	Similar to Proposed Action. Similar acres of Chuckwalla DWMA (162 acres) and Chuckwalla CHU (166 acres) would be affected.	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Permanent occupation of the site by employees could also introduce trash into the area which could attract common ravens. Transmission line towers provide artificial perches and nest sites for raptors and ravens and, therefore, could also attract common raven to the area.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Trash and debris generated by decommissioning activities could attract predators of desert tortoise, common ravens, to the site.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.5/4.5 Climate Change</b>						
	<i>Construction:</i> Construction activities and associated vehicle traffic would generate emissions of GHG pollutants.	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> O&M activities for the Project would be small sources of on-going GHG emissions. Only the solar farm facility would have on-site employees. However, the annual GHG emissions generated by O&M activities at Project facilities would be more than off-set by the avoided greenhouse gas emissions that result from solar-based electrical power generation that effectively displaces other sources of power generation.	Same as Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Greenhouse gas emissions from facility decommissioning would be generally similar in nature to those of facility construction, but emission quantities would likely be less than those generated by construction activities.	Same as Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action

**Table ES-2 (continued)  
Summary of Project Impacts by Alternative**

Resource	Alternative 1 Proposed Action Alternative	Alternative 2 Alternate Action Alternative	Alternative 3 Reduced Footprint Alternative	Alternative 4 No Action (No ROW Grant, No PA)	Alternative 5 No Action: ROW Grant, PA to Exclude Solar	Alternative 6 No Action: No ROW Grant, PA to Allow Solar
<b>3.6/4.6 Cultural Resources</b>	<p><i>Construction:</i> Construction would directly impact at least 57 sites within the footprint of alternative components. Twenty of the sites are potentially CRHR-eligible. In addition, construction would directly impact the potential DTC-CAMA Historic District and the North Chuckwalla Petroglyph District (CA-RIV-1383, NRHP-listed). Construction would indirectly impact the historic landscapes of the Colorado River Aqueduct (NRHP-eligible), the North Chuckwalla Mountains Quarry District (CA-RIV-1814, NRHP-listed), and prehistoric site CA-RIV-330 (NRHP-eligible) by constructing modern elements that would disturb the historic setting of these resources.</p> <p>Native American consultation is on-going at this time and may find that sacred sites, TCPs, or traditional use areas are present within or near the Alternative 1 construction area. Construction may directly disturb Native American resources, impede access to these areas, or otherwise disrupt traditional practices.</p>	<p><i>Construction:</i> Construction would directly impact 42 sites within the footprint of alternative components. Twenty-one of the sites are potentially CRHR-eligible and assumed to be NRHP-eligible. Thirteen are believed to be associated with the DTC-CAMA Historic District. All Project components would have indirect audible and visual impacts on the historic landscapes of the Colorado River Aqueduct (NRHP-eligible), North Chuckwalla Petroglyph District (CA-RIV-1383, NRHP-listed), North Chuckwalla Mountains Quarry District (CA-RIV-1814, NRHP-listed), and prehistoric site CA-RIV-330 (NRHP-eligible) by constructing modern elements that would disturb the historic setting of these resources.</p> <p>Native American impacts would be the same as for the Proposed Action.</p>	<p><i>Construction:</i> Construction would directly impact 41 sites within the footprint of alternative components, as well as the potential DTC-CAMA Historic district and the North Chuckwalla Petroglyph District (CA-RIV-1383, NRHP-listed). Fourteen are potentially CRHR-eligible, nine of these are believed to be associated with the DTC, and one is a contributing, NRHP-listed site in the North Chuckwalla Petroglyph District. All Project components would indirectly impact the historic landscapes of the Colorado River Aqueduct (NRHP-eligible), the North Chuckwalla Mountains Quarry District (CA-RIV-1814, NRHP-listed), and prehistoric site CA-RIV-330 (NRHP-eligible) by constructing modern elements that would disturb the historic setting of these resources.</p> <p>Native American impacts would be the same as for the Proposed Action.</p>	No Impact	No Impact	Similar to Proposed Action
	<p><i>Operations:</i> O&amp;M would primarily have indirect impacts on the historic landscapes of five resources and possibly an unknown number of Native American resources, stemming from new construction within these landscapes that would not be in keeping with the historic nature and setting of the resources. The presence of Project components may exclude Native American access to resources of traditional significance or detract from the viewshed of a sacred site, traditional use area, or TCP.</p>	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Decommissioning:</i> Decommissioning would restore the historic landscapes of three other NRHP-eligible or -listed cultural resources. Additionally, the viewshed of possible sacred sites, TCPs, and traditional use areas would be restored, as would access by Native Americans to use such areas within the Project area. However, direct impacts on one potential historic district and another NRHP- and CRHR-listed district would remain since construction of Alternative 1 would permanently impact sites that contribute to these districts.</p>	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action

**Table ES-2 (continued)  
Summary of Project Impacts by Alternative**

<b>Resource</b>	<b>Alternative 1 Proposed Action Alternative</b>	<b>Alternative 2 Alternate Action Alternative</b>	<b>Alternative 3 Reduced Footprint Alternative</b>	<b>Alternative 4 No Action (No ROW Grant, No PA)</b>	<b>Alternative 5 No Action: ROW Grant, PA to Exclude Solar</b>	<b>Alternative 6 No Action: No ROW Grant, PA to Allow Solar</b>
<b>3.7/4.7 Paleontological Resources</b>						
	<i>Construction:</i> Construction would have low potential for direct impacts on vertebrate fossils and other scientifically valuable paleontological resources.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Same as for construction.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Same as for construction.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.8/4.8 Geology and Soil Resources</b>						
	<i>Construction:</i> Construction would increase exposure of people and/or property to seismic hazards and increase erosion of soils from wind and water.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> O&M would increase exposure of people and/or property to seismic hazards.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Same as for construction.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.9/4.9 Lands and Realty</b>						
	<i>Construction:</i> Construction would develop 4,165 acres, primarily consisting of generally undeveloped BLM-administered land, including 0.0003 percent of the Chuckwalla DWMA and CHU, and a small amount of MWD and private land, precluding other uses of these lands. Additional acreage would temporarily be disturbed during construction for access roads, staging areas, and similar purposes necessary for construction to take place. All portions of the development that would be on BLM-administered land would be compatible with the CDCA Plan.	Similar to Proposed Action (4,100 acres vs 4,165 acres)	Fewer acres developed than Proposed Action (3,292 acres vs 4,165)	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> O&M would continue use of land for the proposed Project, thereby precluding other potential uses of the area.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Decommissioning would make the land available for other uses.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.10/4.10 Noise and Vibration</b>						
	<i>Construction:</i> Construction activities for all Project components would generate temporary increases in local noise levels. On-site noise levels would diminish rapidly with increasing distance from the active construction operations. Noise levels from on-site construction activity and construction-related traffic would not exceed Riverside County land use compatibility standards at existing residences. Temporary noise impacts to wildlife would be limited to the construction sites and immediately adjacent locations. Ground vibrations from construction equipment would not be perceptible at existing residences near the construction sites.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Operational noise levels at the Solar Farm would be limited to occasional vehicle use within the site, minor maintenance activities, and low equipment noise from PCS stations and the on-site substation. Daytime and nighttime operational noise levels from the Solar Farm would be comparable to existing background noise levels at the property line. GT-A-1 would have no operational noise levels. Red Bluff Substation A would generate an operational CNEL level of about 60 dBA outside the Substation property line, but there are no noise-sensitive land uses near the Substation site.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Noise and vibration impacts of facility decommissioning would be similar to those of facility construction, but noise and vibration levels would likely be less than those generated by construction activities.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action

**Table ES-2 (continued)  
Summary of Project Impacts by Alternative**

<b>Resource</b>	<b>Alternative 1 Proposed Action Alternative</b>	<b>Alternative 2 Alternate Action Alternative</b>	<b>Alternative 3 Reduced Footprint Alternative</b>	<b>Alternative 4 No Action (No ROW Grant, No PA)</b>	<b>Alternative 5 No Action: ROW Grant, PA to Exclude Solar</b>	<b>Alternative 6 No Action: No ROW Grant, PA to Allow Solar</b>
<b>3.11/4.11 Public Health and Safety/Hazardous Materials</b>						
	<p><i>Construction:</i> Construction would increase the exposure of people and the environment to hazards related to:</p> <ul style="list-style-type: none"> <li>• Hazardous Materials/Hazardous Waste;</li> <li>• Emergency Evacuation and Emergency Response Plans;</li> <li>• Wildfire; and</li> <li>• Intentionally Destructive Acts.</li> </ul> <p>The 185-foot tower at the telecom site (associated with the Red Bluff Substation) has the potential to increase hazards because of the nearby private airstrip.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Operations:</i> Potential increase in hazards associated with the O&amp;M of the 185-foot telecommunication site tower.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Decommissioning:</i> Decommissioning of Red Bluff Substation would decrease hazards associated with the 185-foot microwave tower at the telecom site.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.12/4.12 Recreation</b>						
	<p><i>Construction:</i> Construction of SF-B would close a portion of one OHV route; however, other travel options exist in the area. There are no OHV or travel routes within GT-A-1 and Red Bluff Substation A. Construction of the visitor's center could have beneficial impacts to the area.</p>	Same as Proposed Action	Same as Proposed Action except that there would be no impact to OHV or recreational activities as construction of SF-C would not require that the three OHV routes in the vicinity be closed or rerouted.	No Impact	No Impact	Similar to Proposed Action
	<p><i>Operations:</i> Similar to construction.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Decommissioning:</i> Similar to construction.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.13/4.13 Socioeconomic and Environmental Justice</b>						
	<p><i>Construction:</i> SF-B and the Red Bluff Substation A are situated on BLM land and, as such, the construction of these facilities would not displace either local or regional businesses or residents, nor would it result in a substantial reduction in employment or income in the regional and local economy. They would result in short-term increases in regional employment and income if the construction crew hired to work on the Project were not previously employed. It could indirectly generate increased expenditures, income, and employment in the local economies in which the construction workforce spends its earnings and would generate direct expenditures in the regional economy for equipment, supplies, and services.</p> <p>No impacts that could occur to environmental justice populations would be disproportionate to these populations.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Operations:</i> O&amp;M for the Project would not result in measurable impacts on socioeconomics of the region or local communities. Likewise, no impacts that could result from O&amp;M on environmental justice populations would be disproportionate to these populations. Operations would not displace either businesses or residents, nor would it substantially reduce the employment or income in the regional economy.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<p><i>Decommissioning:</i> The decommissioning of Project components would result in short-term impacts on the regional economy in Riverside County through an increase in employment required to decommission the DSSF. Once completely removed, potential long-term impacts include a reduction of property tax revenue because the land would no longer be developed and improved, thereby eliminating the requisite property tax.</p>	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action

**Table ES-2 (continued)  
Summary of Project Impacts by Alternative**

<b>Resource</b>	<b>Alternative 1 Proposed Action Alternative</b>	<b>Alternative 2 Alternate Action Alternative</b>	<b>Alternative 3 Reduced Footprint Alternative</b>	<b>Alternative 4 No Action (No ROW Grant, No PA)</b>	<b>Alternative 5 No Action: ROW Grant, PA to Exclude Solar</b>	<b>Alternative 6 No Action: No ROW Grant, PA to Allow Solar</b>
<b>3.14/4.14 Special Designations</b>						
	<i>Construction:</i> Construction of SF-B and Red Bluff Substation A would cause temporary indirect impacts on the Joshua Tree Wilderness Area and Chuckwalla Mountains Wilderness. Indirect impacts would be associated with fugitive dust, noise, and nighttime lighting. Construction would not cause impacts on cultural resources within Alligator Rock ACEC.	Same as Proposed Action	Similar to Proposed Action, slightly reduced impacts for SF-C	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> O&M of SF-B would cause permanent indirect impacts on users of the Joshua Tree Wilderness Area.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Similar to construction and O&M.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.15/4.15 Transportation and Public Access</b>						
	<i>Construction:</i> Delay at intersections would increase slightly; however, the LOS of intersections would remain at "A". Portions of the Project would overlap low-level military flight paths. The Telecom Site would be approximately 5,500 feet from the runway of the former Desert Center Airport. Project-generated traffic would contribute to deterioration of local roads. Road or lane closures, traffic rerouting, and other traffic controls (such as flaggers) would be required for short durations during construction of GT-A-1 for certain activities such as wire stringing across roads.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Minimal traffic impacts. No impacts for other issues.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Similar to construction.	Same as Proposed Action	Same as Proposed Action	No Impact	No Impact	Similar to Proposed Action
<b>3.16/4.16 Visual Resources</b>						
	<i>Construction:</i> Construction would result in the permanent disturbance of approximately 4,165 acres. Impacts from construction activities, equipment, and vehicles would be visible and changes to the characteristic landscape from construction would alter visual resources. For KOPs 1, 2, and 5, the degree of contrast would comply with interim visual management Class II and III objectives. For KOPs 3, 4, and 6, the strong degree of contrast would not comply with interim visual management Class II and III objectives.	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Operations:</i> Impacts from O&M would be visible and changes to the characteristic landscape would alter visual resources. For KOPs 1, 2, and 5, the degree of contrast would comply with interim visual management Class II and III objectives. Due to the proximity of KOPs 3, 4, and 6 to Project components, the degree of contrast would not comply with interim visual management Class II and III objectives.	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action
	<i>Decommissioning:</i> Decommissioning would result in rehabilitating approximately 4,165 acres. Impacts from decommissioning would be visible. Changes to the characteristic landscape from decommissioning would restore the natural visual resources to the landscape. This would not occur until the end of the Project lifespan, which could be greater than 50 years. Due to the slow pace of natural desert ecology, however, it would likely take decades after decommissioning for the landscape to resemble the existing conditions. The level of change to the characteristic landscape would comply with interim visual management Class II and III objectives. Decommissioning activities would be expected to leave the landscape in a condition that does not attract attention.	Similar to Proposed Action	Similar to Proposed Action	No Impact	No Impact	Similar to Proposed Action

**Table ES-2 (continued)  
Summary of Project Impacts by Alternative**

<b>Resource</b>	<b>Alternative 1 Proposed Action Alternative</b>	<b>Alternative 2 Alternate Action Alternative</b>	<b>Alternative 3 Reduced Footprint Alternative</b>	<b>Alternative 4 No Action (No ROW Grant, No PA)</b>	<b>Alternative 5 No Action: ROW Grant, PA to Exclude Solar</b>	<b>Alternative 6 No Action: No ROW Grant, PA to Allow Solar</b>
<b>3.17/4.17 Water Resources</b>	<p><i>Construction:</i> Proposed Project water demand would be approximately 703 AFY for the 26-month construction period, or approximately 25 percent of the available surplus inflow to the groundwater basin (estimated to be 2,600 to 3,300 AFY).</p> <p>Decompaction of the soil over 36 percent of SF-B footprint would minimize any reduction in groundwater recharge caused by compacting the surface soil during construction.</p> <p>Drawdown in the aquifer in the vicinity of the well used to provide water for construction would be a maximum of approximately 18 feet, with minor drawdown extending more than one mile from the pumping well. Impacts would be temporary since they would occur only during construction.</p> <p>Construction would alter surface drainage patterns, but hydrologic modeling indicated that construction would result in minor changes in the 100-year storm characteristics.</p> <p>Runoff from storms could transport spilled substances off site into intermittent stream channels. Potential for flooding would not significantly increase during construction of SF-B. GT-A-1 would not increase flooding potential. Red Bluff Substation A would be constructed over the site of several intermittent stream channels. Design of the Substation incorporates diversion channels to divert runoff around the footprint of the Substation. Once constructed, the diversion channels would reduce the potential for flooding the construction site. A retention basin would also capture runoff and slow and reduce peak flows.</p>	Similar to Proposed Action	Similar to Proposed Action, although slightly reduced impacts	No Impact	No Impact	Similar to Proposed Action
	<p><i>Operations:</i> Impacts would be much less than during construction.</p>	Similar to Proposed Action	Similar to Proposed Action, although slightly reduced impacts	No Impact	No Impact	Similar to Proposed Action
	<p><i>Decommissioning:</i> Effects of decommissioning on water resources would be similar to those described for construction. The effects would primarily be from erosion of altered and unprotected land surfaces.</p>	Similar to Proposed Action	Similar to Proposed Action, although slightly reduced impacts	No Impact	No Impact	Similar to Proposed Action

**Notes:**

- ACEC = Area of Critical Environmental Concern
- AFY = acre-feet per year
- CHU = Critical Habitat Unit
- CNEL = community noise exposure level
- CRHR = California Register of Historic Resources
- dba = A-weighted decibel
- DTC-CAMA = Desert Training Center California-Arizona Maneuver Area
- DWMA = Desert Wildlife Management Area
- GHG = greenhouse gas
- KOP = key observation point
- NRHP = National Register of Historic Places
- O&M = Operation and Maintenance
- OHV = off-highway vehicle
- PM10 = inhalable particulate matter
- PM2.5 = fine particulate matter
- SCAQMD = South Coast Air Quality Management District
- TCP = traditional cultural properties

**Table ES-3  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Air Resources</b>	<p>Sunlight has designed the Project to incorporate various measures that will reduce on-site construction-related emissions and emissions from construction-related traffic.</p> <p><i>AM-AIR-1:</i> Sunlight shall develop and implement a dust control plan that includes the use of dust palliatives to ensure compliance with SCAQMD Rule 403. The dust control plan is expected to focus on reducing fugitive dust from construction activities.</p> <p><i>AM-AIR-2:</i> Construction activity shall be phased across the Solar Farm site in a manner that would minimize the area disturbed on any single day.</p> <p><i>AM-AIR-3:</i> Cut and fill quantities shall be balanced across the Solar Farm site to minimize emissions from grading activities and to avoid the need to import fill materials or to remove excess spoil.</p> <p><i>AM-AIR-4:</i> Sunlight shall use power screeners to obtain sand and gravel requirements on-site, rather than having construction sand and gravel delivered to the Solar Farm site by truck.</p> <p><i>AM-AIR-5:</i> Sunlight shall arrange a shuttle bus program for construction workers, with assembly points in the Palm Springs and Blythe areas. Sunlight expects this shuttle bus system to be heavily used by construction workers, with an average of 89.5 percent of construction workers accessing the Solar Farm site by shuttle bus.</p> <p>SCE has identified two applicant measures that will be implemented during construction of the Red Bluff Substation:</p> <p><i>AM-AIR-6:</i> SCE shall develop and implement a dust control plan to ensure compliance with SCAQMD Rule 403 during substation construction.</p> <p><i>AM-AIR-7:</i> SCE would require bidders for the construction contract to submit a transportation plan describing how workers would travel to the Project site.</p>	<p>MM-AIR-1: Sunlight and SCE shall <u>require all on-site construction equipment to meet EPA Tier 2 or higher emissions standards according to the following:</u></p> <ul style="list-style-type: none"> <li>• <u>April 1, 2010, to December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by the California Air Resources Board (CARB). Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u></li> <li>• <u>January 1, 2012, to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u></li> <li>• <u>Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.</u></li> <li>• <u>A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided when each applicable unit of equipment is mobilized.</u></li> </ul>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Air Resources (cont.)</b>		
		<p><i>MM-AIR-2.</i> Sunlight shall temporarily stockpile chipped or shredded vegetation debris from the Solar Farm site, then spread it on open areas of the site once construction activity has been completed on a subarea.</p> <p><i>MM-AIR-3.</i> Sunlight shall provide <i>up to four</i> re-application of dust palliatives <i>per year</i> at the Solar Farm site to unpaved roads and parking areas and to the open areas between the rows of solar arrays. <i>Re-application</i> of dust palliatives would reduce fugitive dust from on-site vehicle travel and would reduce the net increase in wind erosion from the Solar Farm site.</p> <p><i>MM-AIR-4: The Project construction contractor(s) shall:</i></p> <ul style="list-style-type: none"> <li>• <i>Submit a transportation plan that describes how adherence to AM-AIR-5 will be achieved, thus minimizing daily construction worker trips to the maximum extent feasible;</i></li> <li>• <i>Appoint a construction relations officer to act as a community liason concerning on-site construction activity including resolution of any issues related to PM10 generation;</i></li> <li>• <i>Where available, use electricity from existing power poles rather than temporary diesel or gasoline power generators; and</i></li> <li>• <i>Restrict construction delivery trucks to model year 2001 or newer.</i></li> </ul>
<b>Vegetation</b>	<p><i>AM-BIO-1.</i> A <i>Habitat Compensation Plan</i> is being prepared and will be implemented by the Applicant to compensate for the loss of creosote desert scrub, desert dry wash woodland, and jurisdictional resources. Compensation will be accomplished by acquisition of mitigation land or conservation easements or by providing funding for specific land acquisition, endowment, restoration, and management actions under one of several programs including the recently approved mitigation program created by SB 34 <i>and as required under MM-BIO-2, Off-site Compensation.</i> The <i>Habitat</i></p>	<p><i>MM-BIO-1. Construction Monitoring.</i> A BLM-approved biologist shall conduct construction monitoring during all construction activities to ensure that construction activities are contained within the staked and flagged construction areas at all times. The construction monitor shall also be present during all ground disturbing activities to either actively or passively relocate special status wildlife species, other than the desert tortoise, nesting bird species, and burrowing owl (e.g., rosy boa, chuckwalla, Palm Springs round-tailed squirrel, American badger, and Colorado Valley woodrat [and burro deer,</p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Vegetation (cont.)</b>	<p><i>Compensation Plan</i> will be reviewed and approved by BLM, the USFWS, and CDFG. The precise details of the mitigation, including mitigation ratios, will be established in the BLM ROW grant, USFWS Biological Opinion, and CDFG 2080.1 Consistency Determination. The draft plan is provided in Appendix H.</p> <p>At a minimum, mitigation ratios required in the NECO Plan/EIS are 1:1 for <i>permanent impacts</i> to creosote bush scrub, 3:1 for <i>permanent impacts</i> to desert dry wash woodland, and 5:1 for <i>permanent impacts</i> to the Chuckwalla DWMA and Chuckwalla CHU). Mitigation ratios may be greater based upon the requirements of the USFWS and CDFG. Finally, areas occupied by the burrowing owl will be mitigated at 6.5 acres per occupied burrow (which will be covered by mitigation of creosote bush scrub habitat) and creation or enhancement of two burrows will be implemented for every active burrow.</p> <p><i>AM-BIO-2.</i> A Draft <i>Integrated Weed Management Plan</i> (IWMP) has been prepared pursuant to BLM’s <i>Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States</i> (BLM 2007) and the <i>National Invasive Species Management Plan</i> (The National Invasive Species Council 2008), and will be implemented by the Applicant to reduce the potential for the introduction of invasive species during construction, operation and maintenance, and decommissioning of the Project. The draft plan is in Appendix H of this document and will be reviewed and approved by the BLM.</p> <p>The following measures are required in the Plan and will be implemented by the Applicant to monitor and control invasive species (details associated with these measures are provided in Section 4.3):</p> <ul style="list-style-type: none"> <li>• Preventative Measures During Construction</li> <li>• Containment and Control Measures</li> <li>• Monitoring</li> </ul>	<p>Nelson’s bighorn sheep, and mountain lion if need be), found within the construction zones to a suitable location outside of the Project footprint. <i>The construction monitor shall also inspect fencing and netting at all construction ponds to ensure that the ponds are not accessible to potential avian or canid desert tortoise predators or to wildlife that could drown or become entrapped within the enclosures. Netting and fencing must prevent the ponds from becoming water source “subsidies” to predators or from becoming hazards to native wildlife.</i> The construction monitor shall have the authority to stop work and report directly to the Applicant’s Environmental Manager (EM) to ensure compliance with the Project Description, applicant-proposed measures, and mitigation measures. The construction monitor shall provide the Applicant’s EM with weekly updates and quarterly monitoring reports. After construction has been completed, the construction monitor shall provide the Applicant’s EM with a final monitoring report. The Applicant’s EM shall provide BLM with weekly status updates on the status of construction and monitoring efforts and shall provide BLM with copies of the quarterly monitoring reports and the final monitoring report. BLM shall be responsible for ensuring that construction monitoring is conducted during all construction activities.</p> <p><i>MM-BIO-2. Off-site Compensation: This Mitigation Measure provides further detail and specificity to the habitat compensation land requirements described in Applicant Measure AM-BIO-1. The draft Habitat Compensation Plan shall be revised to reflect acreages and habitat types as described herein. The revised habitat Compensation Plan shall be submitted for approval to BLM, USFWS, CDFG, and CPUC before its finalization and implementation. The Applicant (Sunlight or SCE) shall acquire and protect, in perpetuity, compensation habitat to mitigate impacts to biological resources listed below. The compensation lands shall be placed under conservation management to be funded through the terms described herein. The acreages and ratios shall be based upon final calculation of impacted acreage for each resource and on ratios set forth in Applicant Measure AM-BIO-1 and in the draft Habitat Compensation Plan dated 17 Dec 2010. Acreages of anticipated compensation requirements as summarized throughout</i></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Vegetation (cont.)</b>	<ul style="list-style-type: none"> <li>• Reporting</li> <li>• Success Criteria</li> </ul> <p><i>AM-BIO-3. Pre-Construction Surveys for Special Status Plant Species and Cacti.</i> Prior to construction, the Applicant will stake and flag the construction area boundaries, including the construction areas for the Solar Farm site, Gen-Tie Lines, and Red Bluff Substation; construction laydown, parking, and work areas; and the boundaries of all temporary and permanent access roads. A BLM-approved biologist will then survey all areas of proposed ground disturbance for special status plant species and cacti during the appropriate blooming period for those species having the potential to occur in the construction areas. All special status plant species and cacti observed will be flagged for transplantation. <u>All cacti observed will be flagged for transplantation and special status plant species observed will be flagged for salvage.</u></p> <p><i>AM-BIO-4. Worker Environmental Awareness Program (WEAP).</i> The Applicant will implement a WEAP to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site personnel including surveyors, construction engineers, employees, contractors, contractor’s employees, supervisors, inspectors, subcontractors, and delivery personnel. The program will be implemented during site mobilization, ground disturbance, grading, construction, operation, and closure. Details of the program are provided in Section 4.3.</p> <p>The training will place special emphasis on the special status species that have been observed in the Project locations or have a high likelihood to occur, including special status plant species, desert tortoise and other special status reptile species, Palm Springs round-tailed ground squirrel, burrowing owl, golden eagle, nesting bird species and bat species, and the American badger.</p>	<p><i>this measure are based on impacts analysis of Alternative 1 in Sections 4.3 and 4.4 and ratios described in Applicant Measure AM-BIO-1. Acreages shall be adjusted as appropriate for other alternatives.</i></p> <ul style="list-style-type: none"> <li>• <u>Desert dry wash woodland (101 acres at 3:1 ratio).</u></li> <li>• <u>Occupied desert tortoise habitat (2,757 acres at 1:1 ratio; 1,214 acres at 2:1 ratio; 191 acres at 5:1 ratio).</u></li> <li>• <u>occupied or suitable habitat for breeding or wintering burrowing owls (13 acres for each occupied burrow, estimated as two burrows).</u></li> <li>• <u>state-jurisdictional streambeds (302 acres, including the desert dry wash woodland, above, at 3:1 ratio).</u></li> <li>• <u>creosote bush scrub (4,072 acres at 1:1 ratio).</u></li> <li>• <u>occupied foxtail cactus habitat (estimated as two acres, at 1:1 ratio).</u></li> <li>• <u>undisturbed habitat for most wildlife species including desert kit fox and American badger (i.e., away from sources of noise or other disturbance such as highways, wind farms, etc.) (4,173 acres, at 1:1 ratio).</u></li> <li>• <u>occupied chuckwalla and rosy boa habitat (Red Bluff Substation A site, 149 acres, at 1:1 ratio).</u></li> <li>• <u>suitable/occupied upland shrubland nesting habitat for migratory birds (4,173 acres, at 1:1 ratio).</u></li> <li>• <u>suitable foraging habitat for golden eagles, and within foraging range of a known nesting site (4,173 acres, at 1:1 ratio).</u></li> <li>• <u>suitable or occupied roosting habitat for special status bats (101 acres desert dry wash woodland at Solar Farm B and 149 acres rocky slopes at Red Bluff Substation A), and</u></li> <li>• <u>suitable or occupied habitat for Palm Springs round-tailed ground squirrel (estimated as 92 acres, based on Gen-Tie Line A-1 disturbance), Colorado Valley woodrat (estimated as 149 acres at Red Bluff Substation A location).</u></li> </ul> <p><i>Of the resources listed above, BLM’s focus would be on desert dry wash woodland, occupied desert tortoise habitat, occupied or suitable habitat for breeding or wintering burrowing owls, and state-jurisdictional streambeds. Additional detail is provided in Section 4.3.</i></p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Vegetation (cont.)</b>	<p>BLM will be responsible for ensuring that each construction worker at the site, throughout the duration of construction activities, receives the above training.</p> <p><i>AM-BIO-5.</i> The Applicant will prepare and implement a <i>Vegetation Resources Management Plan</i> that contains the following components (additional detail is provided in Section 4.3):</p> <ul style="list-style-type: none"> <li>• A <i>Vegetation Salvage Plan</i> which discusses the methods that will be used to transplant cacti present within the Project locations following BLM’s standard operating procedures, as well as methods that will be used to transplant special status plant species that occur in the Project locations if feasible.</li> <li>• A <i>Restoration Plan</i> which discusses the methods that will be used to restore creosote bush scrub and desert dry wash woodland habitat that is temporarily disturbed by construction activities.</li> </ul> <p><u>The <i>Vegetation Salvage Plan</i> and <i>Restoration Plan</i> will specify success criteria and performance standards as required per MM BIO-4, <i>Salvage and Restoration Plan Performance Standards</i>.</u> BLM will be responsible for reviewing and approving the Plan and for ensuring that the Applicant implements the Plan including maintenance and monitoring required in the Plan.</p>	<p><u><i>MM-BIO-3. Implement Transplantation. Cacti flagged for transplantation per AM-BIO-3 shall be transplanted per the <i>Vegetation Salvage Plan</i> described in AM-BIO-5 and special status plant species shall be salvaged per the <i>Vegetation Salvage Plan</i> described in AM-BIO-5. The Applicant and SCE shall be responsible for ensuring that all workers at the site, throughout the duration of construction, operation, and decommissioning activities, receives the training described in AM-BIO-4, above. Specific language in Mitigation Measure BIO-3 will take precedence over any discrepancy with the Applicant Measures cited herein.</i></u></p> <p><u><i>MM-BIO-4. Salvage and Restoration Plan Performance Standards. Salvage will occur prior to construction in any area of the proposed Project as described in the approved <i>Vegetation Salvage Plan</i> (described in AM-BIO-5). Post-Project seeding and planting (revegetation) will occur at the decommissioning phase of the Project as described under an approved <i>Restoration Plan</i> (AM-BIO-5). Both salvage and revegetation efforts shall be monitored yearly and shall continue for a period of no less than 10 years or until the defined performance standards are achieved (whichever is sooner).</i></u></p> <p><u><i>The following performance standards must be met by the end of the monitoring period: (a) at least 80% of the species and vegetative cover observed within the temporarily disturbed areas shall be native species that naturally occur in desert scrub habitats; (b) absolute cover and density of native plant species within the revegetated areas shall equal at least 60% of the pre-disturbance or reference vegetation cover; and (c) the site shall have gone without irrigation or remedial planting for a minimum of three years prior to completion of monitoring.</i></u></p> <p><u><i>Remediation activities (e.g., whether additional planting, removal of non-native invasive species, or erosion control) shall be taken during the 10-year period if necessary to ensure the success of the revegetation effort. If the mitigation fails to meet the established performance standards after the 10-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the 10-year period until the performance standards are met, unless otherwise specified by the BLM and CPUC.</i></u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Vegetation (cont.)</b>		<p><i>As needed to achieve performance standards, the project owner shall be responsible for replacement planting or other remedial action as agreed to by BLM and CPUC. Replacement plants shall be monitored with the same survival and growth requirements as required for original revegetation plantings.</i></p> <p><i>If a fire or flood damages a revegetation area within the 10-year monitoring period, the owner shall be responsible for a one-time replacement. If a second fire or flood occurs, no replanting is required, unless the event is caused by the owner's activity (as determined by BLM or other firefighting agency investigation).</i></p> <p><i>MM-BIO-5. Desert Dry Wash Woodland Monitoring and Reporting Plan. In addition to complying with MM-WAT-3 (Groundwater Level Monitoring, Mitigation, and Reporting), the Project owner shall prepare and submit a Desert Dry Wash Woodland Monitoring and Reporting Plan to BLM and CPUC for review and approval prior to commencing project-related pumping activities. Upon approval, the Project owner shall finalize and implement the Plan. Additional details are provided in Section 4.3.</i></p> <p><i>Monthly Desert Dry Wash Woodland Monitoring summary memos shall be submitted to BLM, CDFG, and CPUC during the construction period of the Project. In addition, annual Desert Dry Wash Woodland Monitoring reports shall be submitted for at least the first three years following completion of construction of the Project, if found necessary. The summary memos shall contain the monitoring data required as part of the monitoring program requirements under MM-WAT-3. In addition, each Desert Dry Wash Woodland Monitoring Report shall provide maps and text discussion of each study site, changes in plant health and vigor, changes in groundwater levels in the production wells, and the year's monitoring data.</i></p> <p><i>If results of the groundwater monitoring program under MM-WAT-3 indicate that the project pumping has resulted in water level decline of one foot or more below the baseline trend, and vegetation monitoring for plant stress, mortality, and water potential have documented one or more of the sampling sites for the four groundwater dependent plant species as reaching the threshold (above), the Project owner shall reduce groundwater pumping until water levels stabilize or recover, provide for temporary supplemental watering, or compensate for</i></p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Vegetation (cont.)</b>		<p><i>additional impacts to desert dry wash woodland at the ratio of 3:1, consistent with Mitigation Measure MM-BIO-2. Estimated acreage of additional dry wash woodland impacts shall be submitted to BLM and CPUC for approval. Upon approval, the Project owner shall initiate compensation according to the requirements and conditions for habitat compensation as described in Mitigation Measure MM-BIO-2.</i></p> <p><i>At the conclusion of the three-year monitoring period for Desert Dry Wash Woodland following completion of Project construction, the Project owner, CPUC, and BLM shall jointly evaluate the effectiveness of the Desert Dry Wash Woodland Monitoring and Reporting Plan and determine if monitoring frequencies or procedures should be revised, extended to the operation and decommissioning periods, or eliminated. Should additional data be forthcoming to demonstrate that this potential impact is not verifiable or attributable to this specific project or found inconsistent with state or federal statute, it may be modified or eliminated.</i></p>
<b>Wildlife</b>	<p>Implementation of Applicant Measures BIO-1, BIO-2, BIO-4, and BIO-5 discussed in Section 4.3, Vegetation, would reduce impacts on wildlife as well.</p> <p><i>AM-WIL-1. A Draft Desert Tortoise Translocation Plan has been prepared for the Project and will be implemented by the Applicant to ensure that construction monitoring will be conducted by a BLM-, USFWS-, and CDFG-approved biologists during all construction activities and that any desert tortoise found within the construction zone will be translocated to a suitable location outside of the Project footprint. The draft plan is in Appendix H and will be reviewed and approved by BLM. <u>The final plan will conform to the 2010 USFWS desert tortoise relocation guidelines entitled Translocation of Desert Tortoises (Mojave Population) From Project Sites: Plan Development Guidance. Unpublished Report dated August 2010.</u></i></p> <p>The Desert Tortoise Translocation Plan contains an analysis of several recipient sites for desert tortoises to be translocated from the Solar Farm site and Red Bluff Substation. The final selected recipient site will be determined by BLM, the USFWS, and CDFG.</p>	<p>Implementation of Mitigation Measures BIO-1 through BIO-4 discussed in Section 4.3, Vegetation, would reduce impacts on wildlife as well.</p> <p><i>MM-WIL-1. American Badger and Desert Kit Fox Protection Plan. To avoid direct impacts to American badgers or desert kit foxes, pre-construction surveys shall be conducted for these species concurrent with the desert tortoise surveys. Surveys shall be conducted as described below:</i></p> <p><i>Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the Project area, including areas within 90 feet of all Project facilities, utility corridors, and access roads. Surveys may be concurrent with desert tortoise surveys. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active.</i></p> <p><i>Inactive dens that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit foxes. Potentially and definitely active dens that would be directly impacted by construction activities shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium (such as diatomaceous earth or fire</i></p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Wildlife (cont.)</b>	<p>Desert tortoises found along the linear components of the Project, including the Gen-Tie Line, Telecommunications site, and access roads will be relocated out of harm’s way pursuant to USFWS guidance (<i>U.S. Fish and Wildlife Service. 2009. Desert Tortoise Field Manual. Ventura Fish and Wildlife Office. Ventura, California.</i>) Specifically, biological monitors will be present during all construction activities to ensure that active burrows are avoided. If a desert tortoise is found, the tortoise will be allowed to passively traverse the site while construction in the immediate area is halted. If the tortoise does not move out of harm’s way after approximately 20 minutes, a biologist authorized to handle desert tortoise, will actively move the animal out of harm’s way. Vehicles parked in desert tortoise habitat will be inspected immediately prior to being moved. If a tortoise is found beneath a vehicle, a biologist authorized to handle desert tortoise will be contacted to move the animal out of harm’s way, or the vehicle will not be moved until the desert tortoise leaves of its own accord.</p> <p>For desert tortoises in the Solar Farm site and Red Bluff Substation, they will be relocated using the following phased translocation process (additional details are provided in Section 4.4):</p> <ul style="list-style-type: none"> <li>• Installation of Perimeter Fencing</li> <li>• Clearance Surveys and Translocation</li> <li>• Long-term Monitoring</li> <li>• Reporting</li> </ul> <p>During the construction and operations and maintenance phases of the Project, additional BMPs will also be implemented by the Applicant, as described in Section 4.4.</p> <p><i>AM-WIL-2. Contribute to a USFWS Regional Raven Management Plan. The Applicant shall contribute to the U.S. Fish and Wildlife Service (USFWS) Regional Raven Management Program by making a one-time payment of \$105 per acre of Project disturbance to the national Fish and Wildlife Federation Renewable Energy Action Team raven control account.</i></p>	<p><i>clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, and especially if high or low ambient temperatures could potentially result in harm to badger or kit fox from burrow exclusion, various passive hazing methods may be used to discourage occupants from continued use. After verification that the den is unoccupied it shall then be excavated and backfilled by hand to ensure that no badgers or kit foxes are trapped in the den. In the event that passive relocation techniques fail, the Applicant will contact the California Department of Fish and Game to explore other relocation options, which may include trapping.</i></p> <p><i>MM-WIL-2. Nelson’s Bighorn Sheep Protection Plan. If effects to Nelson’s Bighorn Sheep cannot be avoided, the Applicant shall consult with the California Department of Fish and Game (CDFG) to determine the appropriate level of restoration and mitigation for effects to essential habitat and/or travel corridors for Nelson’s bighorn sheep by implementing the following measures:</i></p> <ol style="list-style-type: none"> <li><i>(a) The Project owner shall compensate or replace the permanent loss of Nelson’s bighorn sheep habitat at a 1:1 ratio as approved by the CDFG. This may include monetary contributions or donations as mitigation which are tied to programs or activities designed to offset potential resource losses or for mitigation banking for habitat restoration, enhancement, or acquisition projects provided that an appropriate and cooperatively developed mitigation agreement has been finalized between the Applicant and CDFG.</i></li> <li><i>(b) Compensation or replacement mitigation should be oriented within or adjacent to the Project area and designed to rectify the same functions, habitat types and species being impacted wherever possible. Off-site compensation should be considered when mitigation measures cannot be applied to adjacent areas or to benefit the same species that are impacted.</i></li> <li><i>(c) All final actions associated with compensation mitigation will be approved by CDFG to insure that agreements are consistent with the CDFG’s Sonoran Desert Mountain Sheep Meta-Population Plan.</i></li> </ol>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Wildlife (cont.)</b>	<p>A <i>Raven Management Plan</i> has been prepared and will be implemented by the Applicant to minimize the potential for the Project to attract ravens to the Project site. The draft plan is in Appendix H and will be reviewed and approved by BLM. Additional details are provided in Section 4.4.</p> <p><i>AM-WIL-3.</i> A Draft <i>Avian and Bat Protection Plan</i> has been prepared and will be implemented by the Applicant to specify necessary actions to be taken to protect nesting bird and bat species, including burrowing owls, nesting birds, and roosting bats. The draft plan is in Appendix H and will be reviewed and approved by BLM. <u>The final plan will conform to the 2010 USFWS avian and bat guidelines entitled Considerations for Avian and Bat Protection Plans U.S. Fish and Wildlife Service White Paper.</u> Additional details are provided in Section 4.4.</p> <p><u><i>AM-WIL-4. Construction Water Storage Pond Design. The temporary construction water ponds shall be designed, constructed, and operated in compliance with all applicable regulatory requirements with respect to design, operation, and maintenance, protection of migratory waterfowl, and raven management. Additional details are provided in Section 4.4.</i></u></p>	<p>(d) <u>Any roads or permanent structures built in Nelson’s bighorn sheep habitat or movement corridors must be constructed in such a way as to allow continued bighorn movement, except in the case of the Solar Farm and Substation facilities which will be fenced. Some strategies could include under- or over passes, ramps cut into steep side slopes, alternatives to continuous guard rails or fence specifications along roads that allow sheep movement. Plans for these structures will be developed in coordination with CDFG.</u></p> <p><u><i>MM-WIL-3. Palm Springs Round Tailed Ground Squirrel Protection Plan. If effects to Palm Springs round tailed ground squirrel cannot be avoided, the Applicant shall consult with the CDFG to determine the appropriate level of restoration or mitigation for effects to essential habitat for Palm Springs round tailed ground squirrel. Additional details are provided in Section 4.4.</i></u></p> <p><u><i>MM-WIL-4. Mojave Fringed-toed Lizard Protection Plan. If effects to Mojave Fringed-toed Lizard cannot be avoided, the Applicant shall mitigate for direct and indirect impacts to stabilized and partially stabilized sand dunes and other Mojave fringe-toed lizard habitat by compensating for lost habitat at ratios ranging from 1:1 to 5:1 depending upon (as detailed in MM-BIO-2):</i></u></p> <ul style="list-style-type: none"> <li><u><i>A. Species known to be present on site</i></u></li> <li><u><i>B. Habitat condition</i></u></li> <li><u><i>C. Proximity of known disturbances</i></u></li> <li><u><i>D. Vegetation type</i></u></li> </ul> <p><u>The Applicant shall provide funding for the acquisition, initial habitat improvements and long-term management of the compensation lands. The habitat compensation requirement, and associated funding requirements based on that acreage, will be adjusted if there are changes in the final footprint of the Project. In lieu of acquiring lands itself, the Applicant may ensure funding to complete the land acquisition by providing CDFG or USWFS, as appropriate, before ground- or vegetation- disturbing activities an irrevocable letter of credit or another form of security begins, as approved by CDFG’s Office of General Counsel before ground- or revegetation-disturbing activities begin.</u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Wildlife (cont.)</b>		<p data-bbox="1203 363 1591 393"><i>Additional detail is provided in Section 4.4.</i></p> <p data-bbox="1203 409 1871 586"><i>MM-WIL-5. Prepare and Implement a Bird Monitoring and Avoidance Plan. Before a ROW grant is issued, the Applicant shall retain a BLM-approved, qualified biologist to prepare a Bird Monitoring and Avoidance Plan in consultation with CDFG and USFWS. This plan shall follow the Avian Protection Plan guidelines outlined by USFWS and Avian Power Line Interaction Committee (APLIC).</i></p> <p data-bbox="1203 602 1877 753"><i>The plan will require monitoring of (1) the death and injury of birds from collisions with facility features such feeder/distribution lines and solar panels, and (2) impacts to aquatic insects from polarized light from solar panels that may affect insectivorous (insect-eating) birds. The study design shall be approved by BLM in consultation with CDFG and USFWS.</i></p> <p data-bbox="1203 756 1591 786"><i>Additional detail is provided in Section 4.4.</i></p> <p data-bbox="1203 802 1885 919"><i>MM-WIL-6. Prepare and Implement Golden Eagle Nesting Surveys, Nest Site Monitoring, and Adaptive Management. Additional details are provided in Section 4.4. Where details of this Mitigation Measure may conflict with Applicant Measure AM-WIL-3, this measure shall take precedence.</i></p> <p data-bbox="1203 935 1885 1382"><i>MM-WIL-7. Alternate to long-distance (greater than 500 meters) desert tortoise translocation. The draft Desert Tortoise Translocation Plan defined under Applicant Measure AM-WIL-1 shall be updated to identify and describe, as an alternative to translocation, a strategy to remove desert tortoises on the project site from the wild and place them permanently in facilities approved by USFWS and CDFG, to be fully funded by the applicants. All suitable care or holding facilities for desert tortoises shall be listed and described in the draft plan, and capacity of each facility to accommodate desert tortoises from the project site shall be provided. The updated draft plan shall be submitted to BLM, CPUC, USFWS and CDFG for review and approval. Upon approval of a final Desert Tortoise Translocation Plan and issuance of state and federal approvals, the applicant (Sunlight and/or SCE), shall either translocate tortoises into the wild or shall permanently place them in approved facilities, consistent with the Final Desert Tortoise Translocation Plan.</i></p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Wildlife (cont.)</b>		<p><i>MM-WIL-8. Plans required under Applicant Measures AM WIL-1, AM WIL-2, and AM WIL-3 shall be submitted for review and approval by USFWS, CDFG, BLM and CPUC.</i></p> <p><i>MM-WIL-9. This measure applies only to Alternative 2, below. Re-orient Substation Alternative B to reduce movement corridor blockage. The substation shall be either moved to the east, or rotated 90 degrees and moved east (without moving into the Alligator Rock ACEC) so its longer side is parallel to Interstate 10. It shall remain as close as possible to Interstate 10, while avoiding existing utilities, and shall allow a corridor for wildlife movement south of the substation. If this alternative is selected, the design and location of the substation shall be developed with input from BLM's biologists to ensure that the ability of wildlife to move from east to west south of the freeway is retained, and the freeway underpass and stream channel crossings are still accessible to wildlife moving from north to south.</i></p>
<b>Climate Change</b>	<p>Three of the five applicant measures adopted by Sunlight for Air Resources would help reduce greenhouse gas emissions in addition to reducing criteria pollutant emissions (AM-AIR-3, AM-AIR-4, and AM-AIR-5).</p>	<p>Two of the three mitigation measures for Air Resources would also be expected to provide some reductions in construction-related greenhouse gas emissions (MM-AIR-1 AND MM-AIR-2).</p>
<b>Cultural Resources</b>	<p><i>AM-CUL-1:</i> A cultural resources monitoring and mitigation plan has been included as a Project design feature to minimize impacts. The plan will include a description of areas to be monitored during construction, a discovery plan that will address unanticipated cultural resources, and provisions for the education of construction workers. Responsible parties for mitigation measures will be identified.</p>	<p><i>MM-CUL-1.</i> The <i>Memorandum of Agreement</i> shall detail the process for activities to proceed in areas where historic properties are now known not to exist; the process for phased completion of field investigations for the evaluation of cultural resources and assessment of effects; a historic property treatment plan (HPTP); procedures to resolve adverse effects under Section 106; coordination between the CEQA process and Section 106 compliance; procedures for <i>treatment of inadvertent discoveries</i>; <i>procedures for determining treatment and disposition of human remains</i>; the process for treating human remains; compliance monitoring; dispute resolution; and tribal participation. Resolution of effects to cultural resources eligible for or listed on the NRHP may include research and documentation, data recovery excavations, curation, public interpretation, use or creation of historic contexts</p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Cultural Resources (cont.)</b>		<p>(especially for historic landscapes and the potential DTC-CAMA historic district), and/or report distribution.</p> <p><i>MM-CUL-2.</i> On the basis of preliminary CRHR eligibility assessments, NRHP eligibility assessments made under the <i>Memorandum of Agreement</i>, or existing NRHP eligibility determinations, the BLM and CPUC may require the relocation of Project components to avoid or reduce damage to cultural resource values. Where operationally feasible, potentially NRHP-eligible resources shall be protected from direct Project impacts by Project redesign within previously surveyed and analyzed areas.</p> <p><i>MM-CUL-3.</i> Where the BLM and CPUC decide that CRHR or NRHP-eligible or -listed cultural resources cannot be protected from direct impacts by Project redesign, the Applicant shall comply with appropriate mitigative treatment(s) that will be detailed in the <i>Memorandum of Agreement</i> and cultural resources mitigation and monitoring plan.</p> <p><i>MM-CUL-4.</i> All CRHR-listed or eligible cultural resources (as determined by the CPUC) and all NRHP-listed or eligible cultural resources (as determined by the BLM) that will not be affected by direct impacts, but are within 50 feet of Project locations will be monitored by a qualified archaeologist. Protective fencing, or other markers, at the BLM’s discretion, shall be erected and maintained to protect these resources from inadvertent trespass for the duration of construction in the vicinity.</p> <p><i>MM-CUL-5.</i> The historic property treatment plan that will be included in the <i>Memorandum of Agreement</i> will, at a minimum, employ avoidance, mitigation and data recovery as mitigation alternatives. As part of the historic property treatment plan, the Applicant shall prepare a research design and a scope of work for evaluation of cultural resources and for data recovery or additional treatment of NRHP-<i>listed or</i> eligible sites that cannot be avoided. Additional content of the treatment plan will be dictated by the consultations associated with the <i>Memorandum of Agreement</i>.</p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Cultural Resources (cont.)</b>		<p data-bbox="1205 367 1885 451"><i>MM-CUL-6.</i> Construction work within 100 feet of cultural resources that require data-recovery fieldwork shall not begin until authorized by the BLM.</p> <p data-bbox="1205 472 1885 854"><i>MM-CUL-7.</i> Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historical and prehistoric resources that could be encountered within the Project area, and under direct supervision of a principal archaeologist. All cultural resources personnel will be approved by the BLM through the agency’s Cultural Resource Use Permitting process. A Native American monitor may be required at culturally sensitive locations specified by the BLM following government-to-government consultation with <i>Indian</i> tribes. The monitoring plan shall indicate the locations where Native American monitors will be required and shall specify the tribal affiliation of the required Native American monitor for each location. The Applicant shall retain and schedule any required Native American monitors.</p> <p data-bbox="1205 878 1885 1109"><i>MM-CUL-8.</i> In the event of inadvertent discoveries during construction, operation and maintenance, or decommissioning, procedures outlined in the <i>Memorandum of Agreement</i> and the monitoring and mitigation plan will be adhered to. At a minimum, this will include stop work orders in the vicinity of the find, recordation and evaluation of the find by a qualified archaeologist, notification of the find to BLM, and appropriate treatment measures, possibly including data recovery or avoidance.</p> <p data-bbox="1205 1117 1885 1230"><i>MM-CUL-9.</i> <u>The BLM will continue to consult with Indian tribes to identify sacred sites, TCPs and traditional use areas that might be affected by the Project. If such places are identified, the BLM will consult further with tribes to resolve access impediments or other identified impacts.</u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

<b>Resource</b>	<b>Applicant Measures</b>	<b>Mitigation Measures</b>
<b>Paleontological Resources</b>	<p><i>AM- PR-1.</i> The Applicant shall be responsible for the following mitigation (more details are provided in Section 4.7):</p> <ul style="list-style-type: none"><li>• A qualified paleontologist will conduct a study to characterize the paleontological sensitivity of the Project Study Area. Should the site characterization and or the site reconnaissance identify areas of high potential for paleontological resources, an additional mitigations could be implemented, as determined by the BLM.</li><li>• A qualified paleontologist will develop a monitoring and mitigation plan prior to construction to mitigate adverse impacts on paleontological resources if excavation is to occur in an area of high paleontological sensitivity. The plan will include measures to be followed in the event that fossil materials are encountered during construction.</li></ul>	
<b>Geology and Soil Resources</b>	<p><i>AM-GEO-1.</i> The Applicant shall include, as part of the construction design plans for the Solar Farm and Gen-Tie Line, the mitigation measures provided in the Earth Systems Southwest (2010) geotechnical survey. These mitigations are summarized in Section 4.8 and in Appendix F, and are subject to BLM approval. The Applicant shall be responsible for implementing these mitigations.</p> <p><i>AM-GEO-2.</i> The Applicant shall implement the following mitigation measures to reduce impacts from wind and water erosion to soils (additional details are in Section 4.8):</p> <ul style="list-style-type: none"><li>• <u><i>Implement Mitigation Measures MM-WAT-6 and MM-WAT-7 discussed in Chapter 4.17, Water Resources.</i></u></li><li>• Obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) Water Quality Order 2009-0009 DWQ;</li></ul>	

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Geology and Soil Resources (cont.)</b>		
	<ul style="list-style-type: none"> <li>• Use nonhazardous dust suppressants approved by the BLM and water on an as-needed basis to suppress wind-blown dust generated at the site during construction. Dust palliatives also would be applied between rows of solar panels for dust suppression during operation;</li> <li>• Implement erosion control measures during construction; and</li> <li>• Use silt fences for erosion control in the event of a storm event along neighboring properties, Power Line Road and along the main drainage to the east of the Solar Farm site.</li> </ul>	
	<p><i>AM-GEO-3.</i> SCE shall undertake the following mitigation measures as part of the Substation Project:</p> <ul style="list-style-type: none"> <li>• Prior to final design of the Substation, a combined geotechnical engineering and engineering geology study shall be conducted by SCE to identify site-specific geologic conditions and potential geologic hazards in sufficient detail to support sound engineering. Appropriate mitigations for identified geological hazards will be identified in the geotechnical study.</li> <li>• For new substation construction, specific requirements for seismic design will be followed based on the Institute of Electrical and Electronic Engineers' 693 "Recommended Practices for Seismic Design of Substations".</li> <li>• New access roads, where required, will be designed to minimize ground disturbance during grading.</li> <li>• Cut and fill slopes will be minimized by a combination of benching and following natural topography where feasible.</li> <li>• Any disturbed areas associated with temporary construction will be returned to preconstruction conditions (to the extent feasible) after the completion of Project construction.</li> </ul>	

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Geology and Soil Resources (cont.)</b>		
	<p><i>AM-GEO-4.</i> SCE shall implement the following mitigation measures to reduce impacts from wind and water erosion to soils (additional details are in Section 4.8):</p> <ul style="list-style-type: none"> <li>• Obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) 2009-0009 DWQ.</li> <li>• Use nonhazardous dust suppressants approved by the BLM to suppress wind-blown dust generated at the site during construction.</li> <li>• Implement erosion control measures during construction.</li> </ul>	
<b>Lands and Realty</b>		
	<p><i>AM-LAND-1.</i> Property owners within 300 feet of the Project shall be notified of all major Project construction milestones, such as start of Project construction. Said property owners shall be provided with a detailed construction schedule at least 30 days before construction so that they are informed as to the time and location of disturbance. Updates shall be provided as necessary.</p> <p><i>AM-LAND-2.</i> The Project shall be designed to minimize disturbance or modification of existing uses such as transmission lines, pipelines, and underground cables. If disturbance or modification of existing uses were necessary, Sunlight shall coordinate with the owners to determine an acceptable solution. Sunlight shall fund any necessary avoidance measures or modifications.</p>	
<b>Noise and Vibration</b>		
	<p><i>AM-NZ-1:</i> Sunlight and SCE shall limit most construction activity to daytime hours consistent with Riverside County noise ordinance limitations. Certain electrical connection activities at the Solar Farm site would occur at night for safety reasons, but would not require any heavy equipment operations.</p> <p><i>AM-NZ-2:</i> SCE shall construct a masonry security wall around the perimeter of the Red Bluff Substation. This wall would also provide localized noise shielding for adjacent areas.</p>	<p><i>MM-NOI-1: Sunlight and SCE shall limit construction activity within a quarter mile of an inhabited dwelling to 6:00 a.m. to 6:00 p.m. during June through September and 7:00 a.m. to 6:00 p.m. during October through May. Certain electrical connection activities at the Solar Farm site would occur at night for safety reasons, but would not require any heavy equipment operations.</i></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Public Health and Safety</b>	<b>Hazardous Materials</b>	
	<b>Sunlight shall be responsible for these mitigations:</b>	
	<i>AM-HAZ-1a:</i> Appropriate spill containment and clean-up kits shall be kept on site during construction and maintained during the operation of <i>the Solar Farm and Gen-Tie Line</i> .	
	<i>AM-HAZ-1b:</i> In accordance with the Emergency Planning & Community Right to Know Act, the Applicant shall supply the local emergency response agencies with a Hazardous Materials Management Plan and an associated emergency response plan and inventory specific to the site. The Applicant shall prepare the plan for approval by the BLM and <i>review and comment by</i> the County of Riverside. The Applicant shall be responsible for implementing the approved plan (additional details are in Section 4.11).	
	<i>AM-HAZ-1c:</i> During construction of the Solar Farm and Gen-Tie Line, BMPs for handling, storing, and disposing of hazardous materials and waste shall be followed (additional details are in Section 4.11).	
	<i>AM-HAZ-1d:</i> An SPCC Plan shall be developed and implemented that would identify primary and secondary containment for oil products stored on site as well as training in spill management in the event of an unexpected release. The Applicant shall prepare the plan for approval by the BLM and <i>review and comment by</i> the County of Riverside. The Applicant shall be responsible for implementing the approved plan (additional details are in Section 4.11).	
	<i>AM-HAZ-1e:</i> The Applicant shall develop an Environmental Health and Safety Plan for the construction and operation of the Project to ensure it includes all activities and compliance to all local, state and federal regulatory requirements. Illness and Injury Prevention Programs will be developed for construction and operation. The Applicant shall prepare the plan for approval by the BLM. The Applicant shall be responsible for implementing the approved plan (additional details are in Section 4.11).	

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Public Health and Safety</b>	<b>Hazardous Materials (cont.)</b>	
	<p><i>AM-HAZ-2:</i> Based on the preliminary information provided in the Phase I ESA and the Class I cultural inventory of the Project Site, the Applicant proposes to take the following steps to better determine the nature and extent of potential MEC issues and then take appropriate corrective action measures. <u>The first step is to better determine the history of military activities within the proposed Project footprint.</u> This would include further research regarding prior MEC removals that may have been issued in the past for certain areas by military or other investigating entities, and may include consultations with DOD personnel and archival research. <u>As a result of the historical occurrence of military training activities throughout the DTC-CAMA, potentially including the Project area, this MEC consultation and archival research will address the entire Project footprint, including the specific areas of concern identified by the Phase I ESA and cultural resource surveys.</u> With that more comprehensive understanding, the Applicant will propose, as necessary, further appropriate above and below-ground assessments, under the direction of an expert consultant team, to delineate areas for further investigation and then removal. The Applicant, under direction from the BLM, will determine which site-specific in-field investigative techniques and methodologies will be utilized to investigate and resolve potential MEC issues prior to Project construction. Finally, all construction workers will receive appropriate MEC health and safety awareness training to ensure that they know what actions to take if unanticipated MEC or other suspicious articles are encountered during construction.</p> <p><i>AM-HAZ-3:</i> The Applicant shall provide the County of Riverside with a project-specific Emergency Response and Inventory Plan prior to initiating construction. The Applicant shall prepare the plan for approval by the BLM and <u>review and comment by</u> the County of Riverside. The Applicant shall be responsible for implementing the approved plan (additional details are in Section 4.11).</p>	

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Public Health and Safety</b>	<b>Hazardous Materials (cont.)</b>	
	<p><i>AM-HAZ-4:</i> Project facilities shall be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health and safety requirements. In compliance with County of Riverside requirements, a project-specific fire prevention plan for both construction and operation of the Solar Farm <u>and Gen-Tie Line</u> will be completed prior to initiation of construction. <u>The fire protection plan shall be approved by the BLM and provided to Riverside County for review and comment.</u></p> <p>Sunlight shall have a Project-specific fire prevention plan in place during construction, operation and decommissioning of the Project. This plan shall comply with applicable County of Riverside regulations and would be coordinated with <u>the BLM Fire Management Officer and</u> the local Fire Department in the Chuckwalla Valley at Tamarisk Park.</p> <p><i>AM-HAZ-5:</i> An emergency response plan and site security plan shall be completed for the Project facilities <u>by qualified professionals. These plans shall be developed in accordance with the BLM and DOE requirements (additional details are in Section 4.11).</u></p> <p><b>SCE shall be responsible for these mitigations:</b></p> <p><i>AM-HAZ-2:</i> Same as above for Sunlight.</p> <p><i>AM-HAZ-6a:</i> SCE shall implement standard fire prevention and response practices for the construction activities where hazardous materials are in use. SCE shall be responsible for implementing the approved plan (additional details are in Section 4.11).</p> <p><i>AM-HAZ-6b:</i> As applicable, SCE shall follow fire codes per California Department of Forestry and Fire Protection (2008) requirements for vegetation clearance during construction of the Project to reduce the fire hazard potential.</p>	

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Public Health and Safety/Hazardous Materials (cont.)</b>	<p><i>AM-HAZ-6c:</i> Hazardous materials and waste handling shall be managed in accordance with the following plans and programs that SCE shall be responsible for implementing:</p> <ul style="list-style-type: none"> <li>• <i>Spill Prevention, Control and Countermeasures Plan (SPCC Plan)</i></li> <li>• <i>Hazardous Materials Business Plans (HMBPs)</i></li> <li>• <i>Storm Water Pollution Prevention Plan (SWPPP)</i></li> <li>• <i>Health and Safety Program</i></li> <li>• <i>Hazardous Materials and Hazardous Waste Handling</i></li> <li>• <i>Emergency Release Response Procedures</i></li> </ul> <p><i>AM-HAZ-6d:</i> Hazardous materials shall be used or stored and disposed of in accordance with Federal, State, and local regulations.</p> <p><i>AM-HAZ-6e:</i> The Substation shall be grounded to limit electric shock and surges that could ignite fires.</p> <p><i>AM-HAZ-6f:</i> All construction and demolition waste shall be removed and transported to an appropriately permitted disposal facility.</p> <p><i>AM-HAZ-7:</i> SCE shall <u>submit FAA Form 7460-1 and receive a Determination of No Hazard to Navigable Airspace and comply with any AC 70/7460-1K (Obstruction Marking and Lighting) requirements from the FAA</u> for construction of the 185-foot microwave tower associated with the Desert Center Communications Site.</p> <p><i>AM-HAZ-8:</i> SCE shall provide <u>the BLM and</u> the County of Riverside with a project-specific Emergency Response and Inventory Plan prior to initiating construction. SCE shall be responsible for implementing the approved plan (additional details are in Section 4.11).</p> <p><i>AM-HAZ-9:</i> Project facilities shall be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health and safety requirements. In compliance with</p>	

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Public Health and Safety/Hazardous Materials (cont.)</b>	<p>County of Riverside requirements, a project-specific fire prevention plan for both construction and operation of the substation shall be completed by SCE prior to initiation of construction. <i>Additional detail is provided in Section 4.11.</i></p> <p><i>AM-HAZ-10: Develop and implement a fire prevention plan. Before the construction permit is issued, the Applicant shall develop and implement a fire protection plan for use during construction and operation. The Applicant shall submit the fire plan, along with maps of the Project site and access roads, to CAL FIRE/Riverside County Fire Department for review and approval before construction begins. Additional detail is provided in Section 4.11.</i></p>	
<b>Recreation</b>	<p>No mitigation proposed.</p>	
<b>Socioeconomic and Environmental Justice</b>	<p><i>AM-SOCIO-1:</i> The public shall be notified of Project activities and scheduling to inform the public of projected impacts on the surrounding area. This notification shall provide the public with the opportunity to plan their personal and business activities appropriately.</p> <p><i>AM-SOCIO-2:</i> Sunlight shall align Gen-Tie lines along existing linear features (such as Kaiser Road) to minimize the social effects of potential visual impacts.</p>	
<b>Special Designations</b>	<p><i>AM-SD-1:</i> During operation and maintenance of Red Bluff Substation, lights shall normally be off. Where needed during emergency and scheduled work during the night, lights shall be shielded, <i>shall</i> be directed downward, and shall be motion sensitive to minimize glare in surrounding areas.</p> <p>Mitigation measures described for Cultural Resources, would be implemented to reduce impacts on cultural resources within the Alligator Rock ACEC.</p>	<p><i>MM-SD-1. The NPS shall be afforded the opportunity to review and comment on the following pre-construction plans required for the Project prior to approval of the plans by the BLM and CPUC: the Vegetation Resources Management Plan, the Lighting Mitigation Plan, the Dust Control Plan, the Integrated Weed Management Plan, and the Construction Traffic Control Plan. Review and comment by the NPS must be within time frames specified by the BLM.</i></p> <p><i>MM-SD-2. The Applicant shall enter into a funding agreement or other financial mechanism, as may be specified in the Record of Decision or Right-of-</i></p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Special Designations (cont.)</b>		
		<p><i>Way Grant, to reimburse the NPS for reasonable costs incurred in the monitoring of the following measures (whether applicant-proposed or BLM-recommended) to address temporary indirect impacts on the Joshua Tree National Park:</i></p> <ul style="list-style-type: none"> <li>• <i>Fugitive dust: AM AIR 1, AM-AIR 6 and MM-VR-3, concerning the development and implementation of a dust control plan that includes the use of dust palliatives to ensure compliance with SCAQMD Rule 403; MM-AIR 3, requiring annual re-application of dust palliatives at the Solar Farm site; and AM-GEO-2 and AM-GEO-4, as they relate to the suppression of fugitive dust during construction and operation.</i></li> <li>• <i>Noise: AM-NZ-1, limiting most construction activity to daytime hours.</i></li> <li>• <i>Nighttime lighting: MM-VR-4, requiring the design and installation of a lighting mitigation plan concerning temporary and permanent exterior lighting.</i></li> </ul> <p><i>MM-SD-03. A Signage and Guidance Plan shall be developed for JTNP by the Applicant and reviewed and approved by both the NPS and the BLM prior to the start of construction of the Project. The intent of this plan is to address the potential indirect effects on NPS land as a result of the influx of workers associated with the mobilization, construction, and demobilization of the Project. Additional details are in Section 4.14.</i></p>
<b>Transportation and Public Access</b>		
	<p><i>AM-TRANS-1:</i> Sunlight shall prepare a Construction Traffic Control Plan in conjunction with Riverside County and/or Caltrans in accordance with Caltrans Manual on Uniform Traffic Control Devices and the California Joint Utility Traffic Control Manual (2010). Details are provided in Section 4.15.</p> <p><i>AM-TRANS-2:</i> Sunlight shall document road conditions at the beginning and end of Project construction and decommissioning and contribute fair share cost for pavement maintenance and other needed repairs.</p>	

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

<b>Resource</b>	<b>Applicant Measures</b>	<b>Mitigation Measures</b>
<b>Transportation and Public Access (cont.)</b>		
	<p><i>AM-TRANS-3:</i> Sunlight shall share Project information with the airport owners if a transmission line alternative that runs near the former Desert Center Airport’s runway is selected to assure that no special precautions are needed.</p> <p><i>AM-TRANS-4:</i> BLM shall coordinate with the DOD R-2508 Complex Sustainability Office, Region IX, based in San Diego, California, and with local regional military installations regarding low-level flight operations relative to the Project to assure that no special precautions are needed.</p>	
<b>Visual Resources</b>		
		<p><i>MM-VR-1: Revegetation.</i> The Applicant and SCE shall minimize the amount of ground surface to be disturbed and revegetate disturbed soil areas (additional details provided in Section 4.16).</p> <p>No less than 30 days following the publication of the BLM’s Record of Decision/ROW Issuance, whichever comes first, the Applicant and SCE shall submit to the BLM a final agency-approved revegetation plan that has been reviewed and approved by the BLM.</p> <p>Within 30 days after completion of Project construction, the Applicant and SCE each shall provide to the BLM for review and approval a written report identifying which items of the revegetation plan have been completed, a summary of all modifications to mitigation measures made during the Project’s construction phase, and which items are still outstanding. It shall also include a plan for revegetation monitoring.</p> <p><i>MM-VR-2: Litter and Trash Control.</i> During construction, all trash and food-related waste shall be placed in self-closing containers and removed weekly, as needed, from the site.</p> <p><i>MM-VR-3: Fugitive Dust Control.</i> <u>To minimize fugitive dust on the Project site, a dust control plan shall be developed that will impose limits on the speed of travel for construction vehicles, and will require that dust palliatives be applied to the site, as described in AM-AIR-1 and AM-AIR6, and in compliance with SCAQMD Rule 403.</u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Visual Resources (cont.)</b>		<p><i>MM-VR-4: Lighting Control.</i> Consistent with safety and security considerations, the Applicant and SCE shall design and install all permanent exterior lighting and all temporary construction lighting such that a) lamps and reflectors are not visible from beyond the Solar Farm site, including any off-site security buffer areas; b) lighting shall not cause excessive reflected glare; c) direct lighting shall not illuminate the nighttime sky, except for required FAA aircraft safety lighting (which shall be an on-demand, audio-visual warning system that is triggered by radar technology); d) illumination of the Project and its immediate vicinity shall be minimized; and e) <u>skyglow caused by Project lighting will be avoided, and f) the plan shall comply with local policies and ordinances. All permanent light sources shall be below 2,500 Kelvin color temperature (warm white) and shall have cutoff angles not to exceed 45 degrees of nadir.</u> The Applicant and SCE each shall submit to the BLM <u>and CPUC</u> for review and approval a <u>Lighting Mitigation Plan</u> (details provided in Section 4.16).</p> <p><i>MM-VR-5: Surface Treatment of Project Structures/Buildings.</i> The Applicant and SCE shall treat the surfaces of all Project structures and buildings visible to the public such that a) their colors minimize visual contrast by blending with the characteristic landscape colors; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and nonreflective, and the insulators shall be nonreflective and nonrefractive. The Applicant and SCE shall comply with BLM requirements regarding appropriate surface treatments for Project elements.</p> <p><i>MM-VR-6: Project Design.</i> The Applicant and SCE shall use proper design fundamentals to reduce the visual contrast to the characteristic landscape. These include proper siting and location; reduction of visibility; repetition of form, line, color (see Mitigation MM-VR-5) and texture of the landscape; and reduction of unnecessary disturbance. Additional details on design strategies are provided in Section 4.16.</p>

**Table ES-3 (continued)  
Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Water Resources</b>	<p><u>AM-WAT-1 training construction staff in the management of hazardous materials and use of spill control and cleanup equipment; AM-WAT-2 having a clear chain of command within the organizational structure with responsibility for implementing, monitoring, and correcting BMPs; AM-WAT-3 covering and containing hazardous materials so that they are not in contact with precipitation or runoff; AM-WAT-4 storing hazardous materials in one or more central areas, and instituting rules requiring all hazardous materials to be secured at the end of the day; AM-WAT-5 maintaining good inventory records; storing hazardous liquids and dispensing equipment in secondary containment; AM-WAT-6 maintaining adequate quantities of spill containment and response equipment at readily accessible points throughout the site; AM-WAT-7 identifying the worst case and most likely spill scenarios, and providing spill response equipment adequate to respond to these scenarios; AM-WAT-8 using chemicals presenting the least environmental hazard wherever possible; AM-WAT-9 storing the smallest quantities of hazardous materials possible on the site; AM-WAT-10 maintaining site security to reduce vandalism; AM-WAT-11 requiring all contractors to abide by the program BMPs and to identify any hazardous materials and specific BMPs pertaining to their trade or activity.</u></p> <p><u>The SPCC Plan for the site would address storage of mineral oil contained in transformers. A SPCC Plan is required when 10,000 gallons or more of mineral oil in electrical equipment is contained on site, or when 1,320 gallons of petroleum is stored on the site, although an SPCC Plan can be voluntarily implemented for lesser quantities. The SPCC Plan would address methods and procedures for managing these products, lighting, security, containment requirements, training requirements, staff responsibilities for inspecting storage and dispensing equipment; and equipment and procedures for responding to a spill or release of stored petroleum products.</u></p> <p><u>Among the features that are incorporated into the Project design to address potential impacts on water resources are the measures identified in the Storm Water Hydrology Report for Alternative B (AECOM, 2010b; Appendix G) to reduce flooding and erosion effects associated with the 100-year design runoff event. The modeling results indicate that the most effective measure to reduce</u></p>	<p><u>MM-WAT-1 Groundwater Wells, Installation. The Applicant proposes to construct new groundwater wells in support of the Project, that would produce water from the Chuckwalla Valley Groundwater Basin (CVGB). The Project owner shall ensure that the wells are completed in accordance with all applicable state and local water well construction permits and requirements. Prior to initiation of well construction activities, the Project owner shall submit for review and comment a well construction packet to the County of Riverside and fees normally required for the County's well permit, with copies to the Compliance Project Manager (CPM). The Project shall not construct a well or extract and use groundwater until approval has been issued by the county and the CPM to construct and operate the well. Wells permitted and installed as part of pre-construction field investigations that subsequently are planned for use as Project water supply wells require CPM approval prior to their use to supply water to the Project.</u></p> <p><u>Post-Well Installation. The Project owner shall provide documentation as required under County permit conditions to the CPM that the well has been properly completed. In accordance with California's Water Code Section 13754, the driller of the well shall submit to the Department of Water Resources (DWR) a Well Completion Report for each well installed. The Project owner shall ensure the Well Completion reports are submitted. The Project owner shall ensure compliance with all County water well standards and the County requirements for the life of the wells, and shall provide the CPM with two copies each of all monitoring or other reports required for compliance with the County of Riverside water well standards and operation requirements, as well as any changes made to the operation of the well.</u></p> <p><u>MM-WAT-2 Construction Water Use. The proposed Project's use of groundwater during construction shall not exceed a total of 1,400 af during the 26 month construction period. Before groundwater can be used for construction, the Applicant shall install and maintain metering devices as part of the water supply and distribution system to document Project water use and to monitor and record in gallons per day the total volume of water supplied to the Project from this water source. The metering devices shall be operational for the life of the Project.</u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Water Resources (cont.)</b>	<p><i>runoff depth and velocity would be AM-WAT-12 decompacting the soil between solar panels to increase infiltration potential.</i></p> <p><i>AM-WAT-13 Riprap increases surface roughness and slows runoff velocities, decreasing sediment transport, and increasing flow depth. Riprap would be used in conjunction with decompaction, as riprap would not mitigate flow or volume.</i></p> <p><i>AM-WAT-14 Retention basins could be located along the upstream western boundary of the Project site to intercept run on storm water flows. The intent of this measure is to reduce overall flow depths, velocities and outflow volume by retaining run-on storm water volume. They would also reduce sediment transport within the Project site.</i></p> <p><i>AM-WAT-15 Check dams can be constructed to address specific post-development hydraulic characteristics that remain after implementation of the decompaction measure. Check dams could be located near the downstream southern boundary of the Project site to intercept run off. Check dams would have an effect on the storm water upstream of each dam because the storm water would back up behind each dam. Check dams would also reduce flow velocities and would retain sediment.</i></p> <p><i>AM-WAT-16 Strip detention basins would be approximately six inches deep and 70 feet wide, and would be designed to follow the topographic contours of the site, so their lengths would be dependent on the locations of the basins on the site. These detention basins could be located near the downstream southern boundary of the Project site to intercept run off storm water flows. The intent of this measure is to reduce outflow volume by detaining run-off storm water volume, similar to the check dam measures. Strip detention basins would not have an effect on the storm water upstream of each basin but would reduce flow velocities and sediment transport leaving the Project site.</i></p>	<p><i>MM-WAT-3 Groundwater Level Monitoring, Mitigation, and Reporting. The Applicant shall submit a Groundwater Level Monitoring, Mitigation, and Reporting Plan to CPM for review and approval in advance of construction activities and before onsite groundwater supply wells are operated. The Groundwater Level Monitoring, Mitigation, and Reporting Plan shall provide detailed methodology for monitoring background and site groundwater levels. Monitoring shall include pre-construction, construction, and Project operation water use. The plan shall establish pre-construction and Project related groundwater level and water quality trends that can be quantitatively compared against observed and simulated trends near the Project pumping wells and near potentially impacted existing wells. Additional details are provided in Section 4.17.</i></p> <p><i>MM-WAT-4 Mitigation for the Use of Fencing. Desert tortoise exclusion fencing and security fencing shall be installed around the entire perimeter of the Project site as described in AM-WIL-1. During construction the desert tortoise exclusion fence will be inspected on a daily basis to ensure the integrity of the fence is maintained. During operation of the Project, fence inspections shall occur at least once per month throughout the life of the Project, and within 24 hours after storms or other events that might affect the integrity and function of desert tortoise exclusion fences. Fence repairs shall be completed within two days (48 hours) of detecting problems that affect the functioning of the desert tortoise exclusion fencing. If fence damage occurs during any time of year when tortoises may be active, the Project owner shall be responsible for monitoring the site of the damaged fence until it is fully repaired, to prevent a desert tortoise from entering the Project area. All incidents of damaged tortoise exclusion fence, including dates of damage and repair, extent of damage, and monitoring summaries (methods and results), shall be reported to the BLM, CPM, CDFG, and USFWS. All wildlife found entrapped or dead in the fence shall be reported to the BLM, CPM, CDFG, and USFWS. Fencing shall be installed with breakaway design features so as not to interfere with or impede storm water or flood flows, or associated sediment loads.</i></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Water Resources (cont.)</b>		<p><i>MM-WAT-5 Construction Period Storm Water Quality. As discussed previously, the waterways that would be affected as a result of Project implementation would not be considered jurisdictional waters under the federal Clean Water Act. As a result, no NPDES permits would be required within the Project area during construction or operation. Therefore, a comprehensive construction-period water quality control plan shall be generated, and recommendations of the plan shall be adhered to. The plan shall be completed by the Applicant before Project construction begins and shall include an evaluation of potential for construction-related storm water pollutant loading that could result from Project construction. The plan shall address and implement all of the issues and recommendations of the Storm Water Pollution Prevention Plan (SWPPP). This mitigation measure requires that a SWPPP for Project construction and decommissioning is prepared prior to commencing with either action.</i></p> <p><i>The plan shall evaluate potential for erosion and sedimentation to occur on site and downstream as a result of construction, as well as potential for construction-related releases of fuels, oils, solvents, concrete wash-out, greases, paints, and other potential water quality pollutants to become entrained in storm water, or otherwise result in the degradation of surface water or groundwater quality. The evaluation shall implement specific measures to minimize potential effects on water quality. These measures may include, but would not be limited to, installation of temporary settling basins, stabilization of disturbed soils, replanting vegetation after disturbance, limitations on construction during wet periods, installation of temporary erosion control devices (fiber rolls, staked straw bales, detention basins, check dams, geofabric, dikes, and temporary revegetation), covering stockpiled loose material during rain events, equipment maintenance to prevent leaks, application of erosion protection to cut and fill slopes, and other BMPs. Sediment shall be retained on site by sediment basins, traps, or other measures. No disturbed surfaces shall be left without erosion control measures in place during the rainy season. Recommendations from the plan shall be applied during construction of all Project-related components.</i></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Resource	Applicant Measures	Mitigation Measures
<b>Water Resources (cont.)</b>		<p data-bbox="1203 367 1881 607"><u>MM-WAT-6 Operation Period Storm Water Flows and Quality. As discussed previously, the waterways that would be affected as a result of Project implementation would not be considered jurisdictional waters under the federal Clean Water Act. As a result, no NPDES permits would be required within the Project area during Project construction or operation. Therefore, the following mitigation measure provides for the explicit implementation of an operations period water quality control program to minimize storm water-related discharges of sediment and other pollutants from the Project site during Project operations.</u></p> <p data-bbox="1203 626 1881 1019"><u>A comprehensive operation-period storm water and flood drainage and water quality control plan shall be completed, and the recommendations of the plan shall be implemented by the Applicant. The plan shall evaluate potential for the Project to exceed storm water discharges during 10-year and 100-year storm events, and shall ensure that the volume of discharge emanating from the Project site during these events is limited to an increase of no more than one percent, in comparison to existing conditions. To meet this condition, storm water shall be retained in on-site storm water retention ponds, infiltration basins, or other storm water control facilities. Channel design for flood control along the Project perimeter shall be sized and designed to minimize scour and disruption to upstream and downstream hydrology, including measures to prevent headcutting, migration of channels, erosion, and downstream sedimentation, under conditions equivalent to a 100-year flood.</u></p> <p data-bbox="1203 1039 1881 1398"><u>The plan shall also evaluate and mitigate relevant potential sources of water quality pollution associated with Project operation. These sources include, but are not limited to, release of sediment, oils, greases, transformer fluid, fuels, paint, trash, pollutants from impervious surfaces (asphalt oils, greases, and brake dust) and other water quality pollutants arising during operation. The plan shall identify operation-period BMPs, including but not limited to implementation of operation period settlement basins, swales, infiltration basins, regularly scheduled maintenance of proposed drainage and flood control facilities to prevent erosion and sedimentation, and storm water quality control BMPs including, but not limited to, regular sweeping of impervious surfaces, equipment maintenance to prevent leaks, replanting native vegetation, and other measures as applicable to minimize potential impacts to storm water quality.</u></p>

**Table ES-3 (continued)**  
**Applicant Measures (AMs) and Mitigation Measures (MMs)**

Note 1: Additional detail on some mitigation measures is provided in Chapter 4.

Notes:

- ACEC = Area of Critical Environmental Concern
- APLIC = Avian Power Line Interaction Committee
- BACT = best available control technology
- BMPs = best management practices
- CARB = California Air Resources Board
- CDFG = California Department of Fish and Game
- CHU = critical habitat unit
- CPM = compliance project manager
- CRHR = California Register of Historic Resources
- CVGB = Chuckwalla Valley Groundwater Basin
- DOD = Department of Defense
- DOE = Department of Energy
- DTC-CAMA = Desert Training Center California-Arizona Maneuver Area
- DWMA = Desert Wildlife Management Area
- DWQ = Division of Water Quality
- DWR = Department of Water Resources
- EM = Environmental Manager
- EPA = US Environmental Protection Agency

- ESA = Environmental Site Assessment
- FAA = Federal Aviation Administration
- HMBP = Hazardous Materials Business Plan
- HPTP = historic property treatment plan
- IWMP = Integrated Weed Management Plan
- MEC = Munitions of Environmental Concern
- NECO Plan = Northern and Eastern Colorado Desert Plan
- NPDES = National Pollutant Discharge Elimination System
- NRHP = National Register of Historic Places
- PM10 = inhalable particulate matter
- ROD = Record of Decision
- ROW = right-of-way
- SB = Senate Bill
- SCAQMD = South Coast Air Quality Management District
- SPCC = Spill Prevention, Control, and Countermeasures Plan
- SWPPP = Stormwater Pollution Prevention Plan
- TCP = traditional cultural property
- USFWS = US Fish and Wildlife Service
- WEAP = Worker Environmental Awareness Program

## CHAPTER 1 – INTRODUCTION

---

Desert Sunlight Holdings, LLC (Sunlight or Applicant), a wholly owned subsidiary of First Solar Development, Inc. (First Solar), proposes to construct and operate a 550-megawatt (MW), nominal capacity, alternating current (AC), solar photovoltaic (PV), energy-generating project known as the Desert Sunlight Solar Farm (DSSF). The Project consists of the PV generating facility (Solar Farm), most of the corridor for the associated 220-kilovolt (kV) generation interconnection line (Gen-Tie Line), and one of two potential sites being considered for a new substation. The Project would be located on lands administered by the US Department of the Interior (DOI), Bureau of Land Management (BLM), Palm Springs-South Coast Field Office.

The Project would develop a new 500- to 220- (500/220-) kV substation (referred to herein as the Red Bluff Substation), where the PV generating facility would interconnect with the Southern California Edison (SCE) regional transmission system. While the Red Bluff Substation is included as part of the Project for planning and environmental considerations, it would be constructed, owned, and operated by SCE, not the Applicant. In addition to approvals sought by Sunlight from federal, state, and local agencies for implementing the DSSF, SCE will seek approvals from the California Public Utilities Commission (CPUC) and other state agencies to develop the Red Bluff Substation. Under California Environmental Quality Act (CEQA) Guidelines, Section 15221, this environmental impact statement (EIS) will satisfy the CEQA requirements for those Project components that require entitlements from state and local agencies.

Because the Project would be located primarily on lands administered by the BLM, the Applicant filed a right-of-way (ROW) application with the BLM to construct, operate, and decommission the Project (Case File Number CACA #48649). The decision regarding the issuance of the ROW grant will be based in part on an evaluation of the Project's potential environmental effects through the environmental review process under the National Environmental Policy Act of 1969 (NEPA) and the requirements of the Federal Land Policy and Management Act of 1976 (FLPMA). As part of the ROW grant application process, the Applicant submitted a Plan of Development (POD) for the Project to the BLM on December 22, 2009. Since then, the Applicant has modified the configuration of the Project's solar arrays and developed two additional Gen-Tie Line alternatives for consideration to improve design and incorporate feedback from public agencies and other stakeholders to minimize adverse environmental impacts. A Revised Project Description (a Supplement to the POD) was submitted to the BLM on March 19, 2010 and will be resubmitted to the BLM prior to issuance of a Notice to Proceed (NTP).

In compliance with NEPA, the BLM prepared this Final EIS to inform the public about the proposed Project and to meet the needs of federal, state, and local permitting agencies in considering the Project. BLM authorization of a ROW grant for the Project would require an amendment to the California Desert Conservation Area (CDCA) Plan (BLM 1980), as amended. The US Department of Energy (DOE) is a cooperating agency on the EIS pursuant to a Memorandum of Understanding (MOU) between DOE and BLM. DOE will consider Sunlight's application for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 2005), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, Public Law (PL) 111-5 (the "Recovery Act").

In order to construct the Red Bluff Substation, SCE first must obtain regulatory authorization from the CPUC., which has discretionary authority to issue a Permit to Construct (PTC) for the Red Bluff

Substation, evaluated herein as a portion of the Project. As allowed by CEQA Guidelines Section 15221, the CPUC intends to use this EIS to provide the environmental review required for its consideration of SCE's PTC application under CEQA once that application is filed. The CPUC and BLM have signed an MOU that defines the relationship of the two agencies, and identifies CPUC as a cooperating agency with the BLM for preparation of this EIS. Following preparation of the EIS by BLM, the CPUC will determine whether the EIS adequately accommodates the requirements of CEQA and can be used to support its decision on the substation.

The Applicant is coordinating with other federal agencies, including the US Fish and Wildlife Service (USFWS) and the US Army Corps of Engineers (USACE), regarding potential Project approvals and any associated NEPA compliance requirements. The Applicant is also coordinating with California state and local agencies, including the California Department of Fish and Game (CDFG), California Department of Transportation (Caltrans), Metropolitan Water District of Southern California (MWD), California Regional Water Quality Control Board (RWQCB), South Coast Air Quality Management District (SCAQMD), and Riverside County, regarding potential Project approvals and any associated CEQA compliance requirements.

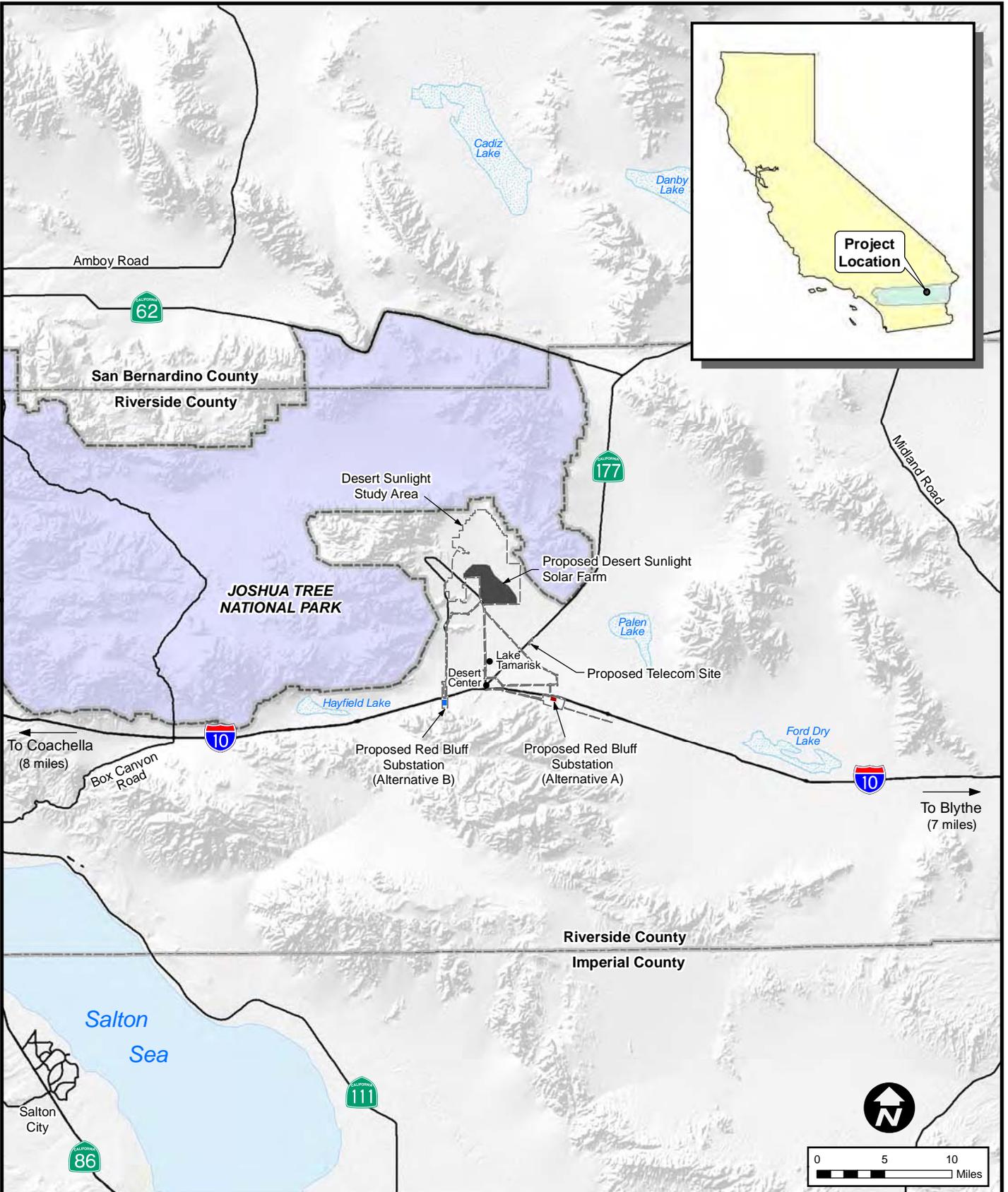
This EIS describes and evaluates the environmental impacts that are expected to result from construction, operation, maintenance, and decommissioning of the Project and presents recommended mitigation measures that, if adopted, would avoid, minimize, or mitigate the environmental impacts identified. In accordance with NEPA *and* CEQA requirements, this EIS also identifies alternatives that respond to the stated purpose and need for the proposed Project (including *one No Action and two No Project* Alternatives) that could avoid or minimize significant environmental impacts associated with the Project as proposed by the Applicant and SCE, and evaluates the environmental impacts associated with these alternatives. Specifically, the information contained in this EIS will be considered by the BLM in its deliberations regarding approval of the ROW grant and may also be considered by the other, applicable agencies with regard to their respective permits, including DOE, CPUC, and other federal, state, and local agencies.

## 1.1 PROJECT LOCATION AND OVERVIEW

The Project area is a largely vacant, undeveloped, and relatively flat land area located in the Chuckwalla Valley of the Sonora Desert in eastern Riverside County. The area proposed for the Solar Farm (Figure 1-1) is approximately six miles north of Interstate 10 (I-10) and the rural community of Desert Center and four miles north of Lake Tamarisk, between the cities of Coachella (to the west) and Blythe (to the east). The Project Area contains existing transmission lines, telephone lines, and pipelines, as well as dirt roads. Joshua Tree National Park is north, east, and west of the area; at its closest point, the Solar Farm site is approximately 1.4 miles southwest of the national park boundary. The Eagle Mountain Mine is approximately one mile west of the Project Study Area.

The Project consists of three main components associated with generating and delivering electricity and one provision that would determine the suitability of the Project application area for solar development:

- Solar Farm site (the main PV generating facility);
- 220-kV Gen-Tie (*interconnection*) Line; and
- 500/220-kV substation (the Red Bluff Substation).



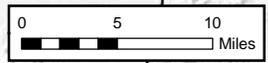
**LEGEND**

-  Desert Sunlight Study Area Boundary
-  Proposed Desert Sunlight Solar Farm
-  Joshua Tree National Park
-  Intermittent Water Feature
-  Perennial Water Feature



DESERT SUNLIGHT SOLAR FARM

**Figure 1-1**  
**Regional Map**



The determination of the suitability of the project application area for solar development would be made as part of the plan amendment process, as described in Section 1.6.

The Solar Farm site, where the power would be generated, would encompass up to 3,912 acres. The Solar Farm would consist of several components:

- Main generation area, which includes PV arrays, combining switchgear, overhead lines, and access corridors;
- Operations and Maintenance (O&M) Facility;
- Solar Energy Visitor Center;
- On-site substation (where the voltage of the Solar Farm-generated electricity would be stepped up to 220 kV, which is the voltage of the Gen-Tie Line); and
- Site security and fencing.

The Gen-Tie Line would transmit the electricity generated at the Solar Farm to the regional transmission system, through the Red Bluff Substation where the power from the Solar Farm would feed into the SCE's existing Devers Palo Verde 1 (DPV1) 500-kV *interconnection* line. The Gen-Tie Line would be up to 12.2 miles long, encompassing up to 256 acres. *The 256 acres would be utilized for the entire 160-foot-wide transmission ROW; however, permanent disturbance would be up to 92 acres.* The Applicant plans to use steel monopoles for the Gen-Tie Line. Poles are expected to be 135 feet high and approximately 900 to 1,100 feet apart.

The Red Bluff Substation would consist of a 500/220-kV substation on approximately 76 acres, with up to 20 acres needed for related drainage control, up to 31 acres for access roads, up to 33 acres for *interconnection* line connections, up to 8 acres for an electric distribution line, and *up to* an acre for telecommunications facilities. It would interconnect the power from the Solar Farm (through the Gen-Tie Line) to SCE's DPV1 *interconnection* line, which passes next to the two alternative substation sites evaluated in this EIS. Red Bluff Substation features include:

- Interconnection lines to connect the substation to the DPV1 line;
- Connection of the Project's Gen-Tie Line into the substation;
- Modification of some existing Florida Power & Light (FPL) structures (towers) near the substation;
- Construction of an electric distribution line for substation light and power;
- Installation of telecommunications facilities associated with the DSSF and substation;
- Construction of drainage control features outside (but next to) the substation footprint; and
- Construction of or improvements to existing access roads.

For each of the three Project components, the Applicant has provided the following alternative configurations:

- Two Solar Farm configurations, SF-B and SF-C;
- Three Gen-Tie Line configurations, GT-A-1, A-2, and B-2; and

- Two Red Bluff Substation configurations, Alternatives A and B.

One additional Solar Farm layout (SF-A) and one additional Gen-Tie Line configuration (GT-B-1) were eliminated from further consideration because of biological and cultural resources constraints.

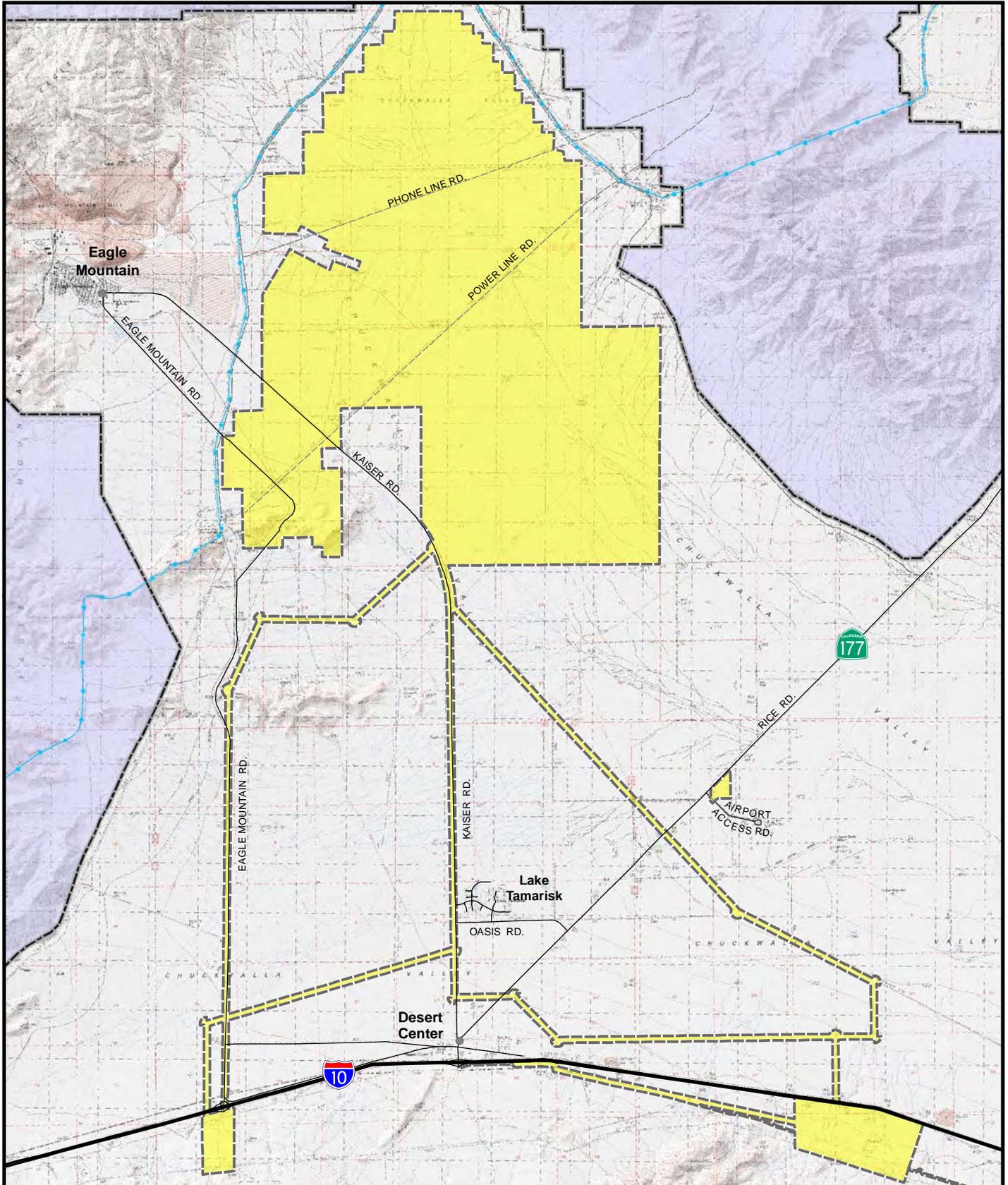
In addition, two access road alternatives (Access Roads 1 and 2) have been identified for Red Bluff Substation Alternative A.

To provide a sufficiently large area to evaluate a reasonable range of alternatives for the Solar Farm site, the Gen-Tie Line route, and the Red Bluff Substation, including ancillary facilities, the Applicant established a Project Study Area of over 19,000 acres (Figure 1-2). The Project Study Area includes over 16,000 acres studied for siting of the Solar Farm site, over 2,000 acres studied for siting of the Gen-Tie Line, over 650 acres studied for siting of the Red Bluff Substation, approximately 140 acres considered for access roads to the Red Bluff Substation, 40 acres for telecommunications facilities, and approximately 230 acres for the distribution line for substation light and power.

The Applicant's process for evaluating and selecting from among various areas considered for the Project Study Area was undertaken in consultation with the BLM and was based on a number of criteria, including:

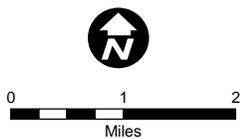
- A contiguous site with flat topography (grade of less than three percent) large enough for siting a 550-MW solar PV facility with minimal cut and fill;
- Avoidance of areas that are highly pristine or biologically sensitive, such as designated Wilderness Areas, Areas of Critical Environmental Concern, Desert Wildlife Management Areas, etc.;
- Avoidance of high-quality habitat for listed species (e.g., choosing Project locations in Category III [lowest quality] desert tortoise habitat);
- Avoidance of known cultural or historic sites and recreational resource areas;
- Proximity to existing transmission facilities with sufficient capacity for Project output and suitable locations for interconnection;
- Proximity to established highway and road access;
- Availability of land for sale or lease at a reasonable cost; and
- Location within an area that has been identified as a Competitive Renewable Energy Zone (CREZ) under California's Renewable Energy Transmission Initiative (RETI), and a Solar Energy Study Area in the BLM/DOE Programmatic Solar Energy Development EIS.

Once the Project Study Area was chosen, the Applicant conducted preliminary biological, cultural, hydrological, and geological reviews of the entire Project Study Area in order to evaluate site conditions and eliminate portions of the Project Study Area considered unsuitable for development of the Project facilities. Based on the preliminary study, more thorough and detailed biological, cultural, hydrological, and geological studies were conducted on the portions of the Project Study Area considered suitable for development, including all areas considered for the three Project components. These detailed studies were done in order to determine the optimal configurations for



**LEGEND**

-  Project Study Area
-  Joshua Tree National Park



Source: First Solar, 2010.



DESERT SUNLIGHT SOLAR FARM

**Figure 1-2**  
**Project Study Area**

alternatives to be considered for the Project components. The alternative configurations were sited to avoid and then minimize impacts to sensitive environmental resources to the extent possible. Further biological, cultural, hydrological, and geological reviews were conducted for areas added to the Project Study Area since the Applicant's December 2009 submittal of the POD.

## 1.2 PURPOSE OF AND NEED FOR ACTION

Sunlight applied to the BLM for a ROW grant on federal public land, pursuant to FLPMA, to develop the Solar Farm, the Gen-Tie Line route, and the Red Bluff Substation. The Applicant also applied to the DOE for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 2005), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, PL 111-5 ("Recovery Act"). This section discusses the purpose and need for the Proposed Action, as required by NEPA, the Applicant's objectives for the Project, and CEQA project objectives for the Red Bluff Substation.

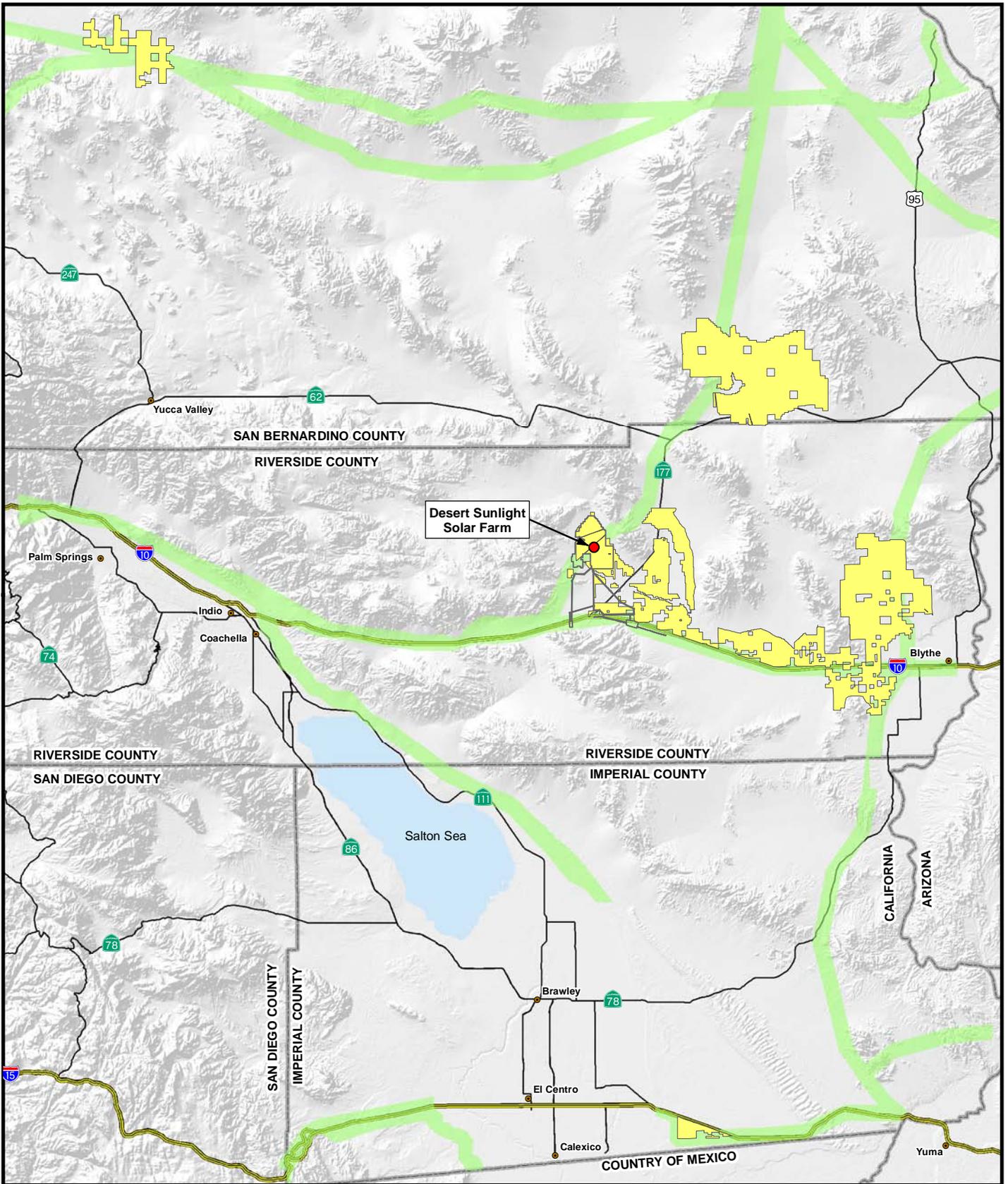
### 1.2.1 BLM Purpose and Need

In accordance with FLPMA (Section 103(c)), public lands are to be managed for multiple uses that take into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant ROW on public lands for systems of generation, transmission, and distribution of electric energy (Section 501(a)(4)). Taking into account the BLM's multiple use mandate, the purpose and need for the proposed action is to respond to a FLPMA ROW application submitted by Desert Sunlight Holdings, LLC to construct, operate, maintain, and decommission a solar PV energy-generating facility and associated infrastructure on public lands administered by the BLM in compliance with FLPMA, BLM ROW regulations, and other applicable federal laws and policies.

In conjunction with FLPMA, the BLM's applicable authorities include the following:

- Executive Order 13212, dated May 18, 2001, which mandates that agencies act expeditiously and in a manner consistent with applicable laws to increase the production and transmission of energy in a safe and environmentally sound manner.
- *Section 211* of the Energy Policy Act of 2005 (EPAct 2005), which *states that "the Secretary of the Interior should . . . seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity."*
- Secretarial Order 3285A1, Renewable Energy Development by the DOI, dated February 22, 2010. This Secretarial Order establishes the development of renewable energy as a priority for the DOI and creates a Departmental Task Force on Energy and Climate Change. It also announced a policy goal of identifying and prioritizing specific locations (study areas) best suited for large-scale production of solar energy. The Project Study Area is within one of the study areas identified by the BLM under this order, as shown on Figure 1-3.

The BLM will decide whether to deny the proposed ROW, grant the ROW, or grant the ROW with modifications. Modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR 2805.10(a)(1)).



Desert Sunlight Solar Farm

**LEGEND**

- Solar Energy Study Areas
- Designated Utility Corridor



0 10 20 Miles

Source:  
Department of Energy, 2010.  
Department of Interior, 2010.



DESERT SUNLIGHT SOLAR FARM

**Figure 1-3**

**BLM Solar Energy Study Areas in Project Area**

### **1.2.2 DOE Purpose and Need**

The DOE is a cooperating agency on this EIS, in accordance with an MOU the BLM signed in January 2010. The DOE's purpose and need for agency action is to comply with its mandate under EPAct 2005 by selecting eligible projects that meet the goals of the act. The DOE's proposed action is issuance of a loan guarantee for this Project under Title XVII of the EPAct 2005, as amended by Section 406 of the Recovery Act. The Recovery Act requires that construction for the Project commence by September 30, 2011.

The DOE's purpose and need for the agency action is based on federal laws addressing the financing and promotion of renewable energy projects and need for immediate economic stimulus. The EPAct 2005 established a federal loan guarantee program within DOE for eligible energy projects. Title XVII of EPAct 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the U.S. at the time the guarantee is issued." The two principal goals of the loan guarantee program are to encourage commercial use in the US of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The EPAct 2005 was amended by the Recovery Act to create Section 1705, authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects that commence construction before September 30, 2011. The primary purposes of the Recovery Act are job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and state and local fiscal stabilization. The Section 1705 program is designed to address the current economic conditions of the nation, in part, through renewable energy, transmission and leading edge biofuels projects.

On December 16, 2009, Sunlight submitted an application to the DOE Loan Guarantee Program for a federal loan guarantee for the Desert Sunlight Solar Farm at Desert Center, California, in response to DOE's October 7, 2009 solicitation, "Federal Loan Guarantees for Commercial Technology Renewable Energy Generation Projects under the Financial Institution Partnership Program." For this solicitation, DOE is implementing the application process by directly working with certain qualified financial institutions through a set of procedures established by DOE as its Financial Institution Partnership Program (FIPP). In general, the FIPP is intended to expedite the loan guarantee process and expand senior credit capacity for the efficient and prudent financing of eligible projects under Section 1705 of Title XVII that use commercial technologies. This objective will be primarily accomplished by additional roles defined for certain financial institutions satisfying applicable qualifications set forth by DOE. Under the FIPP program, proposed borrowers and project sponsors may not apply directly to DOE but must instead work with a financial institution that meets DOE qualification as a Lead Lender.

### **1.2.3 Desert Sunlight Holdings LLC Objectives for the Project**

Sunlight's fundamental objective for the DSSF Project is to construct, operate, maintain and eventually decommission a 550-MW PV energy facility and associated interconnection transmission infrastructure, and to facilitate SCE's construction and operation of a substation in order to provide renewable electric power to California's existing transmission grid to help meet federal and state renewable energy supply and greenhouse gas (GHG) emissions reduction requirements. Sunlight is

committed to constructing and operating the Project in an environmentally responsible manner and to providing a sustainable source of renewable energy to the state's investor-owned utilities and the public. Sunlight's specific objectives for the DSSF Project are:

- To construct and operate a cost competitive 550-MW solar PV energy facility using First Solar's proven thin-film PV technology to provide a renewable and reliable source of power to California's investor-owned utilities;
- To locate the Project on contiguous lands with high solar insolation and relatively flat terrain at sufficient scale to maximize operational efficiency while minimizing environmental impacts and water use;
- To minimize environmental impacts and land disturbance by locating the Project near existing transmission infrastructure and roads and by avoiding sensitive environmental areas, recreational resources and wildlife habitats (e.g., Desert Wildlife Management Areas, Areas of Critical Environmental Concern);
- To assist California and its investor-owned utilities in meeting the State's Renewables Portfolio Standard (RPS) and GHG emissions reduction requirements, including the requirements set forth in Senate Bill (SB) 1078 (California Renewables Portfolio Standard Program), Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006), and the Governor's Executive Order S-14-08 to increase the state's Renewable Energy Standard to 33 percent renewable power by 2020. In particular:
  - California's RPS mandate that requires the state's investor-owned utilities (IOUs) to supply 20 percent of California's total electricity through renewable energy generation by 2010, as set forth in SB 1078 (2001-2002 Reg. Sess.) (establishing the California RPS Program) and SB 107 (2005-2006 Reg. Sess.) (accelerating the 20 percent requirement to 2010). As of the first quarter of 2010, California's IOUs were obtaining only 15 percent of their electricity from renewable energy generation against the end-of-year 20 percent target. The CPUC reported that the IOUs were expected to meet the 2010 target only in 2012 or 2013, two to three years behind schedule, and that half of new RPS projects approved by the CPUC since 2002 and under development are delayed due to lack of transmission or generation permitting at the county, state, or federal level.<sup>1</sup>
  - Governor Schwarzenegger's issued Executive Order S-14-08 to streamline California's renewable energy project approval process and increase the state's renewable energy standard to 33 percent renewable energy by 2020. *The IOUs will have to almost quadruple their annual renewable energy procurement, from 27 terawatt-hours (TWh) in 2007 to 102 TWh by 2020 to meet this requirement.*<sup>2</sup>
  - California's GHG emission reduction goals set forth in AB 32 that require the state's GHG emissions be reduced to 1990 levels by 2020.
- To develop a source of renewable electric power that can be placed into service in an expeditious manner by interconnecting to SCE's existing transmission grid at DPV1 at a

<sup>1</sup> Renewables Portfolio Standard Quarterly Report Q4 2009, California Public Utilities Commission, pp. 4, 7-8.

<sup>2</sup> 33 percent Renewables Portfolio Standard Implementation Analysis Preliminary Results, June 2009, California Public Utilities Commission, p. 8.

substation location reviewed by SCE and interconnecting to the California Independent System Operator (CAISO) grid through serial interconnection queue positions as part of the Large Generator Interconnection Process (LGIP).

To assist in meeting these objectives, and after evaluating numerous potential locations and alternative Project configurations in consultation with BLM, the Applicant applied for a ROW grant to construct and operate a 550-MW solar PV energy facility on BLM-administered land at the Desert Sunlight location using its proven thin film PV technology, entered into power purchase agreements (PPAs) to supply renewable power, and obtained priority access to transmit 550 MW of renewable power on SCE's existing DPV1 *interconnection* line at the Red Bluff Substation. Sunlight also applied to DOE for a loan guarantee under Title XVII of EAct 2005, as amended by Section 406 of the Recovery Act of 2009, to assist in financing the Project (refer to Section 1.2.2 for more information). Through this application the Applicant will assist the BLM and DOE in meeting their respective Purposes and Needs of contributing toward fulfillment of the economic stimulus and renewable energy development objectives of EAct 2005, the Recovery Act, Presidential and Secretarial orders, and federal laws, regulations, and mandates.

#### 1.2.4 CEQA Project Objectives

SCE proposes to construct the Red Bluff Substation in response to interconnection requests from Desert Sunlight Holdings LLC as part of the LGIP. CEQA Guidelines Section 15124(b) requires a statement of project objectives. The project objectives for the Red Bluff Substation are to:

- Respond to interconnection requests as part of the LGIP from generators in the Desert Center area by constructing a substation to interconnect with the DPV 500-kV interconnection line;
- Provide safe and reliable electrical service consistent with the North American Electric Reliability Corporation (NERC), Federal Energy Regulatory Commission (FERC), CAISO, and SCE's planning design guidelines and criteria;
- Meet project need while minimizing environmental impacts; and
- Meet project need in accordance with the Large Generation Interconnection Agreement.

### 1.3 AUTHORIZING ACTIONS

#### 1.3.1 Major Authorizing Laws and Regulations

The BLM is preparing this EIS in compliance with NEPA, FLPMA and applicable regulations to inform the public about the proposed Project and to meet the needs of federal, state, and local permitting agencies in considering the Project. BLM authorization of a ROW grant for the Project would require a resource management plan amendment to the CDCA Plan (BLM 1980), as amended. DOE will also consider Sunlight's application for a loan guarantee under Title XVII of the EAct 2005, as amended by Section 406 of the Recovery Act.

In addition, the CPUC has discretionary authority to issue a *Permit to Construct (PTC)* for the Red Bluff Substation, evaluated herein as a portion of the Project. *Because portions of the Project's alternative Gen-Tie Line routes would cross unincorporated privately owned land, MWD owned land, and/or Riverside County owned land within the jurisdiction of Riverside County, the County has authority to issue a Public Use Permit for the*

*Project. Additionally, Riverside County has the authority to issue an Encroachment Permit for access to the County road ROW. As allowed by the CEQA Guidelines, the CPUC and Riverside County intend to use this EIS to provide the environmental review required for their respective approvals of the relevant portions of the Project.*

The Applicant is also coordinating with other federal, state, and local agencies regarding potential Project permits and approvals and any associated NEPA or CEQA compliance requirements. Other federal as well as state and local permitting authorities may also intend to rely upon the analysis presented in this EIS for fulfillment of their respective regulatory obligations.

The following sections provide an overview of the major federal (BLM and non-BLM), state, and local policies, plans, programs, and laws that apply to the Project. Additional requirements are discussed for each environmental resource in Chapter 3.

### **1.3.2 Relationship to BLM Policies, Plans, Programs, and Laws**

#### ***Federal Land Policy and Management Act of 1976***

FLPMA provides the BLM's overarching mandate to manage the lands and resources under its stewardship based on the principles of multiple use and sustained yield. Multiple use is a concept that directs management of lands and resource values in a way that best meets the present and future needs of Americans. It is defined as "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources" (FLPMA §103[c]). In processing a land use plan amendment, BLM must also comply with the BLM Planning Regulations (43 CFR Part 1600) and the BLM Land Use Planning Handbook (H-1601-1).

#### ***California Desert Conservation Area Plan***

The CDCA encompasses 25 million acres in Southern California designated by Congress in 1976 through FLPMA. The BLM manages about 10 million of those acres. Congress directed the BLM to prepare and implement a comprehensive long-range plan for the management, use, development, and protection of public lands within the CDCA. The 1980 CDCA Plan, as amended, is based on the concepts of multiple use, sustained yield, and maintenance of environmental quality. The CDCA Plan provides overall regional guidance for BLM-administered lands in the CDCA and establishes long-term goals for protection and use of the California desert.

The CDCA Plan establishes four multiple use classes, multiple use class guidelines, and plan elements for specific resources or activities, such as motorized vehicle access, recreation, and vegetation. *Project compliance with the multiple use classes is discussed in Section 4.9, Lands and Realty.* The multiple use classes are:

- Class C (Controlled Use)—About four million acres are Class C. These include 69 wilderness areas (3,667,020 acres) created by Congress with the October 1994 passage of the California Desert Protection Act. These lands are to be preserved in a natural state; access generally is limited to nonmotorized, nonmechanized means—on foot or horseback.
- Class L (Limited Use)—About four million acres are Class L. These lands are managed to protect sensitive, natural, scenic, ecological, and cultural resource values. They provide for generally lower-intensity, carefully controlled multiple uses that do not significantly diminish resource values.

- Class M (Moderate Use)—About 1.5 million acres are Class M. These lands are managed in a controlled balance between higher-intensity use and protection. A wide variety of uses such as mining, livestock grazing, recreation, energy, and utility development are allowed. Any damage that permitted uses cause must be mitigated.
- Class I (Intensive Use)—About 500,000 acres are Class I. These lands are managed for concentrated use to meet human needs. Reasonable protection is provided for sensitive natural values and mitigation of impacts, and impacted areas are rehabilitated when possible.

### ***Northern and Eastern Colorado Desert Coordinated Management Plan***

The Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan) is a Habitat Conservation Plan and amendment to the 1980 CDCA Plan that provides:

- A comprehensive framework for ecosystem management, including recovery of three populations of the desert tortoise;
- A single landscape basis for ecosystem management for three federal land administering agencies within the planning area: BLM, Joshua Tree National Park (eastern half only), and all of Chocolate Mountains Gunnery Range managed by the U.S. Navy; and
- A structure that integrates ecosystem management into a broader context of agencies' mandates, including BLM's multiple use management mission.

The NECO planning area consists of 5.5 million acres, covering portions of BLM field offices in Needles, El Centro, and Palm Springs. The plan amendment is also cooperatively joined by the California Department of Fish and Game through the statewide Sikes Act Memorandum of Agreement. *Project compliance with the NECO Plan is discussed in Section 4.9, Lands and Realty.*

### **1.3.3 Relationship to Other Federal Plans, Policies, Programs, and Laws**

This section summarizes the other major federal plans, policies, programs, and laws that apply to the Proposed Action.

#### ***National Environmental Policy Act***

NEPA (42 USC. 4321 et seq.) declares a continuing federal policy that directs “a systematic, interdisciplinary approach” to planning and decision-making and requires the preparation of environmental statements for “major Federal actions significantly affecting the quality of the human environment.” The President’s Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508) require federal agencies to identify and assess reasonable alternatives to proposed actions that will restore and enhance the quality of the human environment and avoid or minimize adverse environmental impacts. (See also Department of Energy Regulations, 10 CFR Part 1021.) Federal agencies are further directed to emphasize significant environmental issues in project planning and to integrate impact studies required by other environmental laws and Executive Orders into the NEPA process. The NEPA process should therefore be seen as an overall framework for the environmental evaluation of federal actions. In processing ROW applications, BLM must also comply with the Department of the Interior’s regulations applicable to implementing the procedural requirements of NEPA (43 CFR Part 46), as well as BLM’s NEPA Handbook (H-1790-1).

**Clean Air Act**

The Clean Air Act (42 USC 7401-7661), as amended, regulates air pollution to improve air quality. It regulates air emissions from area, stationary, and mobile sources. This law also authorizes the US Environmental Protection Agency to establish National Ambient Air Quality Standards to protect public health and the environment.

**Clean Water Act**

The Clean Water Act (CWA) (33 USC 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the US must obtain a state certification that the discharge complies with other provisions of the CWA. The RWQCBs administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredge or fill material) from a point source into waters of the US. Section 404 establishes a permit program administered by the USACE regulating the discharge of dredged or fill material into waters of the US, including wetlands. The CWA also contains the requirements under which the RWQCBs set water quality standards for all contaminants in surface waters.

**Endangered Species Act of 1973**

The Endangered Species Act (ESA) (16 USC 1531-1543) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The USFWS administers the ESA. The major components of the ESA are:

- Provisions for the listing of threatened and endangered species;
- The requirement for consultation with the USFWS on federal projects that may affect listed species or their habitat;
- Prohibitions against "take" of listed species. Under the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct"; and
- Provisions for permits to allow the incidental taking of threatened and endangered species.

**National Historic Preservation Act of 1966, as Amended**

The National Historic Preservation Act (NHPA) (16 USC 470) requires federal agencies with jurisdiction over a proposed federal project to take into account the effect of the undertaking on cultural resources that are listed or eligible for listing on the National Register of Historic Places (NRHP). The act requires that the agencies afford the State Historic Preservation Office, any potentially affected Indian tribe, and the Advisory Council on Historic Preservation with an opportunity to comment on the undertaking.

**1916 Organic Act, as Amended**

The Secretary of the Interior is responsible for protecting units of the National Park System pursuant to the National Park Service 1916 Organic Act (16 U.S.C. 1, 2, 3 and 4) which consists of the Act of August 25, 1916 (39 Stat. 535) and amendments thereto.

### **1.3.4 Relationship to State and Local Laws, Plans, Policies, and Programs**

This section summarizes the major state and local laws, plans, policies, and programs that apply to the Proposed Action.

#### ***Air Quality Management District***

The proposed Project locations are within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), which reviews the plans and specifications for construction in the proposed Project area. SCAQMD would assess emissions and possible air contamination resulting from construction and operational activities (e.g., road dust, windblown contaminants, and emissions from construction activities).

#### ***California Endangered Species Act***

The California Endangered Species Act (CESA) (Fish and Game Code 2050 et seq.) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect a species that is both state and federally listed, compliance with the federal ESA will satisfy CESA if the CDFG determines that the federal incidental take authorization is “consistent” with CESA under Fish and Game Code Section 2080.1 and issues a Consistency Determination to that effect. For projects that will result in a take of a state-only listed species, the applicant must apply for a take permit under Section 2081(b).

#### ***California Fish and Game Code, Streambed Alteration Agreements***

Sections 1601 to 1603 of the California Fish and Game Code require notifying CDFG prior to constructing any project that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental review process. When an existing fish or wildlife resource may be substantially adversely affected, CDFG is required to propose reasonable project changes and/or mitigation to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

#### ***State Historic Preservation Office***

The California State Historic Preservation Office (SHPO) reviews state programs and projects that may impact historic resources that are located on state-owned land pursuant to California Public Resources Code § 5024 and 5024.5.

#### ***California’s Renewables Portfolio Standard***

California’s RPS requires each of the state’s IOUs to supply 20 percent of its total electricity through renewable energy generation by the year 2010, as set forth in SB 1078 (2001-2002 Reg. Sess.) (establishing the California RPS Program) and SB 107 (2005-2006 Reg. Sess.) (accelerating the 20 percent requirement to the year 2010). Additionally, Governor Schwarzenegger’s Executive Order S-14-08 streamlined California’s renewable energy project approval process and increased the state’s renewable energy standard to 33 percent renewable energy by 2020. The California Energy

Commission will certify that electricity produced by the Project is eligible for the IOUs' RPS compliance after the Project achieves commercial operation.

### **California Renewable Energy Transmission Initiative**

The California RETI is a statewide planning process that has been underway for over two years to identify the transmission projects needed to accommodate California's renewable energy goals. Stakeholders have actively participated in the planning process. Phases 1 and 2 of the RETI project resulted in the identification and refinement of Competitive Renewable Energy Zones (CREZs), areas determined to hold the greatest potential for cost-effective and environmentally responsible renewable energy development.<sup>3</sup> The Project Study Area is located in an area that has been included by the RETI within the Riverside East CREZ.

### **California Large Generator Interconnection Process**

Electricity from the Project would be delivered to customers by the CAISO, acting as a transmission provider, through the transmission system owned by SCE and Pacific Gas and Electric (PG&E). In order to obtain the right to connect to the CAISO grid, a proposed electric generating facility with more than a 20-MW capacity must first apply for a queue position with CAISO through the LGIP. Applications for the Project's queue positions were submitted in 2006, obtaining positions 146 and 147. Next, the proposed generator must obtain a Feasibility Study, a System Impact Study, and a Facility Study from CAISO, a process that often takes several years. The final Facility Study for the Project *was completed* in 2010. Finally, the proposed generator must obtain a Large Generator Interconnection Agreement (LGIA) from CAISO. *This was received in August 2010*, more than three years after obtaining the queue positions.

### **Riverside County General Plan**

*Portions of the proposed interconnection lines are* within Riverside County's Desert Center Planning Area. The Riverside General Plan aims to preserve the natural character of the unincorporated areas of Riverside County and the Desert Center. The plan encourages clustering of development for the preservation of contiguous open space, aims to limit off-road vehicle use, and requires new development to comply with desert tortoise critical habitat designation requirements.

## **1.4 REQUIRED FEDERAL, STATE, AND LOCAL PERMITS, APPROVALS AND LICENSES**

Federal, state, and local permits and approvals would be required before construction and operation of the Project could proceed. A list of the major permits, approvals, and consultations required is presented in the following sections. The Applicant would be responsible for obtaining all permits and approvals required to implement any authorized activities.

### **1.4.1 Federal Permits and Status**

<sup>3</sup> Renewable Energy Transmission Initiative Phase 2B Draft Report, April, 2010, p. 1-1.

Table 1.4-1 provides a list of the federal permits, approvals, or authorizations anticipated to be required for the Project, and the status of relevant permit applications.

**Table 1.4-1  
Status of Project Federal Permits, Approvals, and Authorizations**

Permit or Approval	Lead Agency	Agency Action or Status
FLPMA ROW Grant	BLM	<p>The ROW Grant is subject to NEPA review and terms and conditions as set forth under FLPMA and BLM's implementing regulations. If the Project is approved, BLM will issue a ROW Grant at the end of the NEPA process.</p> <p>The original FLPMA Standard Form 299 (SF 299) ROW application for the Project was submitted to the BLM in November 2006; updates were submitted in February 2007, June 2009, October 2009, <i>February 2010</i>, April 2010, and August 2010. The original POD was submitted in April 2007 with an update, based on revised BLM POD guidelines, submitted in October 2008. Because of Project technology changes, another revision was submitted in December 2009, with amendments submitted in March 2010.</p>
CDCA Plan Amendment	BLM	BLM authorization of a ROW Grant for the Project will require a CDCA Plan Amendment. The amendment will be addressed as part of the FLPMA and NEPA processes as provided for in BLM Planning Regulations (43 CFR Part 1600), and BLM Land Use Planning Handbook (H-1601-1).
Review of Sunlight's Application for a Loan Guarantee under Title XVIII of EPA Act 2005	DOE	DOE is a cooperating agency in the preparation of this EIS. DOE will use the EIS as part of its review process for the loan guarantee.
Section 404 Clean Water Act (CWA) Permit	USACE	Sunlight <i>submitted</i> a jurisdictional delineation report to assess whether the Project locations contain waters or wetlands subject to federal CWA jurisdiction <i>on September 1, 2010. Sunlight obtained written concurrence from USACE on December 28, 2010, that the Project footprint contains no waters of the US subject to USACE/EPA jurisdiction under Section 404 of the CWA.</i>
Endangered/Threatened Species Consultation and Incidental Take Statement under the Federal ESA	USFWS	<i>The BLM submitted the Biological Assessment to the USFWS initiating the ESA Section 7 consultation process on October 15, 2010.</i> Biological surveys for federally listed species were conducted for the proposed Project locations, including the proposed transmission corridors and substation locations.
National Historic Preservation Act Section 106 Compliance	BLM	Identification and evaluation of cultural resources within the Project's Area of Potential Effects (APE) is ongoing. The BLM has initiated consultation with the State Historic Preservation Office and notified them of its intent to prepare a <i>Memorandum of Agreement (MOA)</i> for the Project. The <i>MOA</i> will specify the procedures to follow for the phased conclusion of additional field investigations and evaluation of cultural resources within the APE. The <i>MOA</i> will also specify the process for the assessment of effects to resources within the APE that are determined to be eligible for inclusion in the NRHP. The <i>MOA</i> will stipulate the requirement for the Historic Property Treatment Plan/Mitigation Plan to be prepared that will outline measures to avoid, minimize, or mitigate adverse effects to NRHP-eligible resources. The <i>MOA</i> will be signed prior to completion of the Record of Decision (ROD) for the Project and will ensure compliance with Section 106 of the NHPA.

**Table 1.4-1 (continued)**  
**Status of Project Federal Permits, Approvals, and Authorizations**

<b>Permit or Approval</b>	<b>Lead Agency</b>	<b>Agency Action or Status</b>
Archaeological Resources Protection Act, Cultural Resource Use Permit	BLM, State Office	A BLM Cultural Resource Use Permit will be obtained for the purposes of testing to determine the NRHP significance of identified sites and to conduct data recovery on sites adversely affected by Project construction and operation.
Fieldwork Authorization	BLM, Palm Springs-South Coast Field Office	A BLM Fieldwork Authorization was obtained prior to conducting Class III cultural resource inventories for the Project.
Native American Consultation	BLM	Sunlight is coordinating with the BLM to support the BLM's consultation with Native American tribes for the purpose of identifying sacred sites and other places of traditional religious and cultural importance, and to incorporate appropriate mitigation measures in the event such sites are located during construction. Consultation with tribes has been initiated and will continue throughout the NEPA and Section 106 compliance processes.
Department of Defense (DOD) Review	DOD	<i>The BLM requested further review of the Project by the DOD for its potential impact on military overflights and operations.</i>

#### 1.4.2 State Permits and Status

Table 1.4- provides a list of the state permits, approvals, or authorizations anticipated to be required for the Project, as well as the status of relevant permit applications.

**Table 1.4-2**  
**Status of Project State Permits, Approvals, and Authorizations**

<b>Permit or Approval</b>	<b>Lead Agency</b>	<b>Agency Action or Status</b>
Endangered/Threatened Species Take Authorization under CESA and Sections 2050 (general provision for endangered species) and 2080 (take of endangered species) of the California Fish and Game Code	CDFG	CESA review and approval will be required for impacts to state listed species. Focused biological surveys for sensitive species were done for all potential Project areas. CDFG is expected to complete a Consistency Determination for the Project, concurring with the USFWS's Biological Opinion for those species listed under both the ESA and CESA.
Section 1600-1602 Streambed Alteration Agreement process under the California Fish and Game Code	CDFG	Sunlight is coordinating with the CDFG on the scope of potential jurisdictional streambeds under the Fish and Game Code Sections 1600–1602. <i>Sunlight submitted a Streambed Alteration Agreement Notification to CDFG on November 5, 2010.</i> Sunlight will work with the CDFG to prepare and implement appropriate mitigation associated with any necessary Streambed Alteration Agreement.
Storm Water requirements under California Water Code and the CWA	RWQCB	Sunlight is coordinating with the Colorado River Basin RWQCB to determine the potential scope of storm water coverage for the construction and operation of the PV facility and related infrastructure. Sunlight will incorporate best management practices for storm water management and control.
Section 401 Certification under CWA	RWQCB	CWA Section 401 certification would be required in the event that the Project requires a federal permit or license that may result in a discharge to navigable waters. If certification is required, Sunlight will apply to the RWQCB to obtain certification.

**Table 1.4-2 (continued)**  
**Status of Project State Permits, Approvals, and Authorizations**

<b>Permit or Approval</b>	<b>Lead Agency</b>	<b>Agency Action or Status</b>
Interconnection Agreement	CAISO	<i>On August 9, 2010, Sunlight received SCE's and CAISO's signature pages to the Large Generation Interconnection Agreement, which is dated August 4, 2010.</i>
Permit to Construct (PTC)	CPUC	CPUC is a cooperating agency in the preparation of this EIS. The EIS will provide environmental review coverage pursuant to CPUC's CEQA requirements, as described in the CPUC-BLM MOU. SCE will need to obtain a PTC for Red Bluff Substation. SCE submitted the PTC application to the CPUC <i>on November 17, 2010.</i>
Encroachment Permit	Caltrans	An encroachment permit will be needed where the transmission corridor alternatives cross the I-10 and SR-177 corridors in order to reach the SCE Red Bluff Substation Site alternatives located south of I-10.
Fugitive Dust Control Plan	SCAQMD	A fugitive dust control plan will be developed in accordance with SCAQMD requirements prior to construction. Sunlight will obtain any additional permits or registrations required by the SCAQMD for the Project, as applicable.
Consultation on Sacred Areas to comply with state requirements	Native American Heritage Commission (NAHC)	The NAHC has been contacted. Follow-up contacts with Native Americans are in progress. Fourteen local tribes have been contacted and invited to participate in the Programmatic Agreement ( <i>now a Memorandum of Agreement</i> ) development process, and were invited to the Programmatic Agreement Development Kick-Off meeting held April 23, 2010. The BLM met with individual tribes, on request, to present information and answer questions.

### 1.4.3 Local Permits and Status

Table 1.4-3 provides a list and status of the local permits, approvals, and authorizations anticipated to be required for the Project, as well as the status of these permit applications.

**Table 1.4-3**  
**Status of Project Local Permits, Approvals, and Authorizations**

<b>Permit or Approval</b>	<b>Lead Agency</b>	<b>Agency Action or Status</b>
Public Use Permit	Riverside County	Sunlight is in discussions with Riverside County to determine whether any land use permit would be required for the Project alternatives that may incorporate private land. <i>The County has indicated that a Public Use Permit will be required for the Project's Gen-Tie Line crossings of privately held land.</i>
<i>Land License Agreement</i>	<i>MWD</i>	<i>Sunlight will work with MWD to obtain a Land License Agreement with MWD to cross MWD land owned in fee.</i>
Encroachment or other Permits	Riverside County and MWD	Permission for crossings of Kaiser Road or MWD easements will be secured before construction begins, as necessary.

## 1.5 DOCUMENT ORGANIZATION AND ISSUES TO BE ADDRESSED

### 1.5.1 Document Organization

This document follows regulations promulgated by the Council on Environmental Quality (CEQ) for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508); the Department of the Interior's NEPA regulations, 43 C.F.R. Part 46; the BLM NEPA Handbook, H-1790-1; Sections 201, 202, and 206 of FLPMA (43 CFR 1600); the BLM Land Use Planning Handbook, H1601-1; and DOE's NEPA implementing procedures (10 CFR 1021). This EIS describes the components of and reasonable alternatives to the Proposed Action and environmental consequences of the Proposed Action and the alternatives. In addition, the document incorporates provisions of CEQA to allow the CPUC to use this EIS in its environmental review and approval process for the Red Bluff Substation. This document also addresses DOE's Floodplain and Wetland Environmental Review Requirements (10 CFR 1022).

The EIS organization is as follows:

**Chapter 1** provides general background on the Project; identifies the purpose and need for action; describes the roles of the BLM, other agencies, and authorities regulating various aspects of the Project; and summarizes the public involvement process for the Project.

**Chapter 2** describes the Proposed Action and draft land use plan amendment decisions to be made and the alternatives development and screening process conducted for the Project. It also presents a range of reasonable Project alternatives that address the stated purpose and need for the Project, and identifies and explains why some alternatives were considered but not analyzed in detail.

**Chapter 3** describes the affected environment (existing conditions) for 16 environmental components in the Proposed Action area and identifies potential projects contributing to cumulative impacts.

**Chapter 4** provides a comprehensive analysis and assessment of impacts (direct, indirect, and cumulative) and mitigation measures (by environmental component) for the Proposed Action and other alternatives (including *a No Action and two No Project Alternatives*). It also describes other aspects of BLM compliance with NEPA procedures, including a description of unavoidable adverse impacts, the relationship between short-term use and long-term productivity, and any irreversible or irretrievable commitments of resources (40 CFR 1502.16), as well as addressing CEQA requirements.

**Chapter 5** identifies the persons, groups, agencies and other governmental bodies that were consulted or that contributed to the preparation of the EIS; describes Native American consultations and public participation during scoping; describes the public comment process; provides a list of EIS preparers; and lists agencies, organizations, and persons to whom the EIS will be sent or has been sent.

**Chapter 6** provides the references used in preparing the EIS.

**Chapter 7** includes a glossary and list of acronyms and abbreviations used in the EIS.

**Chapter 8** provides an index for key words in the EIS.

Appendices contain information that supplements or supports the analyses in the body of the EIS.

### 1.5.2 Issues to be Addressed

The issues evaluated in this EIS include the physical, biological, cultural, socioeconomic, and other resources that have the potential to be affected by activities related to the Proposed Action and alternatives. The issues are:

- Air Resources;
- Biological Resources – Vegetation;
- Biological Resources – Wildlife;
- Climate Change;
- Cultural Resources;
- Paleontological Resources;
- Geology and Soil Resources;
- Lands and Realty;
- Noise and Vibration;
- Public Health and Safety and Hazardous Materials;
- Recreation;
- Socioeconomics and Environmental Justice;
- Special Designation Areas;
- Traffic, Transportation, and Public Access;
- Visual Resources; and
- Water Resources (Surface and Groundwater).

Resources that do not exist in the Project area and, therefore, do not warrant analysis in the EIS include:

- Grazing;
- Wild Horses and Burros; and
- Mineral Resources.

## 1.6 BLM LAND USE PLAN AMENDMENT PROCESS

The principal resource management plan covering the proposed Project is the BLM's California Desert Conservation Area (CDCA) Plan of 1980, as amended. The Project Study Area is within the planning area designated under a 2002 amendment to the CDCA Plan—the Northern and Eastern Colorado Desert Coordinated Management Plan (NECO Plan). In the CDCA and NECO Plans, the location of the proposed Project includes land that is mostly classified as Multiple Use Class M (Moderate Use) and some as Multiple Use Class L (Limited Use). *Chapter 3 (Energy Production and Utility Corridors Element) of the CDCA Plan, as amended, also requires that newly proposed power generation sites*

that are not already identified in the Plan be considered through the plan amendment process. The application area is not identified within the Plan and, therefore, a plan amendment is required to include the area as a recognized element within the Plan and to determine the suitability of the application area for solar development. This EIS acts as the mechanism for complying with NEPA for the required plan amendment and to comply with the CDCA requirements.