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## **5.17 CUMULATIVE IMPACTS**

### **5.17.1 Introduction**

This Application for Certification (AFC) for the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF or Project) has been prepared in accordance with the California Energy Commission's (CEC) Power Plant Site Certification Regulations (CEC-140-2008-001-REV1, current as of July 2008). In addition, this AFC includes elements necessary for the United States (U.S.) Bureau of Land Management (BLM) to permit the Project through the National Environmental Policy Act (NEPA). The "Applicant" for purposes of this AFC comprises Rio Mesa Solar I, LLC, Rio Mesa Solar II, LLC, and Rio Mesa Solar III, LLC, owners of the three separate solar plants and certain shared facilities being proposed. These three Delaware limited liability companies will hold equal one-third shares in the ownership of shared facilities and will separately own their respective plants. They are wholly owned by Rio Mesa Solar Holdings, LLC (a Delaware limited liability company) which is in turn wholly owned by BrightSource Energy, Inc. (BrightSource) a Delaware corporation and the ultimate parent company. The Applicant will use BrightSource's solar thermal technology for the Rio Mesa SEGF.

The proposed project site is situated on the Palo Verde Mesa in Riverside County, California, 13 miles southwest of the City of Blythe, and is located partially on private land and partially on public land administered by BLM. The project will include three solar concentrating thermal power plants and a shared common area to include shared systems. The first plant, a 250 megawatt (MW) (nominal) facility known as Rio Mesa I, will be constructed at the south end of the project and owned by Rio Mesa Solar I, LLC. The second plant, another 250 MW (nominal) facility known as Rio Mesa II, will be located in the central portion of the project site and owned by Rio Mesa Solar II, LLC. Rio Mesa III, a third 250 MW (nominal) facility, will be constructed in the northern portion of the project site and owned by Rio Mesa Solar III, LLC. These three plants will be connected via a common overhead 220 kilovolt (kV) generator tie-line (gen-tie line) to the Southern California Edison (SCE) Colorado River Substation (CRS) approximately 9.7 miles to the north.

Each plant will utilize a solar power boiler (referred to as a solar receiver steam generator or SRSG), located on top of a dedicated concrete tower, and solar field based on proprietary heliostat mirror technology developed by BrightSource. The reflecting area of an individual heliostat (which includes two mirrors) is about 19 square meters (205 square feet [sq. ft.]). The heliostat (mirror) fields will focus solar energy onto the SRSG which converts the solar energy to superheated steam. In each plant, a Rankine cycle non-reheat steam turbine receiving this superheated steam will be directly connected to a rotating generator that generates and pushes the electricity onto the transmission system. Each plant will generate electricity using solar energy as its primary fuel source. However, auxiliary boilers will be used to operate in parallel with the solar field during partial load conditions and occasionally in the afternoon when power is needed after the solar energy has diminished to a level that no longer will support solar generation of electricity. These auxiliary boilers will also assist with daily start-up of the power generation equipment and night time preservation.

This section considers cumulative effects that will result from the incremental effects of the Rio Mesa SEGF when considered together with the effects of other past, present, and reasonably foreseeable future

projects in the project vicinity, an area described in detail in Section 5.17.4. The analysis determines whether the effects of the Project and other actions will overlap in time or geographic extent; whether the effects of the Project would interact with, or intensify, the effects of the other actions; and whether significant cumulative impacts will result. The terms summarized below and defined in Table 5.17-1 are used in this analysis to discuss the potential cumulative effects.

- **Project Effects:** Project effects include direct effects caused by the action and occurring at the same time and place, and indirect effects caused by an action that are later in time or farther removed in distance but are still reasonably likely to occur. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 Code of Federal Regulations [CFR] 1508.8).
- **Cumulative Effects:** Additive or interactive effects resulting from the incremental effect of the project when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions (40 CFR 1508.7 and 1508.25(c)). Interactive effects may be either countervailing (the net cumulative effect is less than the sum of the individual effects) or synergistic (the net cumulative effect is greater than the sum of individual effects). This AFC addresses cumulative effects that are reasonably foreseeable rather than speculative.
- **Reasonably Foreseeable Future Actions:** This term is used in concert with the Council on Environmental Quality (CEQ) definitions of cumulative effects, however the term itself is not further defined (CEQ 1997). Most regulations that refer to “reasonably foreseeable” do not define the meaning of the words, but do provide guidance on the term. For this analysis, reasonably foreseeable future actions are those likely (or reasonably certain) to occur within the time frame used for analyzing environmental consequences and are not purely speculative. The determination of “reasonably foreseeable” is based on existing plans, permits, permit applications, announcements such as Federal Register notices, and/or other published NEPA or California Environmental Quality Act (CEQA) documents.

**Table 5.17-1  
Definitions of Direct, Indirect, and Cumulative Effects**

Effect Issues	Direct Effect	Indirect Effect	Cumulative Effects
Nature of effect	Typical/inevitable/predictable	Reasonably foreseeable/probable	Reasonably foreseeable/probable
Cause of effect	Project	Project’s direct and secondary effects	Project’s direct and secondary effects combined with effects of other activities
Timing of effect	Project construction and implementation	Sometime after direct effects	At time of project construction or in the future
Location of effect	Within project effect area	Within boundaries of systems (i.e., resources) affected by project	Within boundaries of systems affected by the project

Source: Oregon Department of Transportation and Federal Highway Administration, 2001.

**5.17.2 Laws, Ordinances, Regulations, and Standards**

Discussion of compliance with laws, ordinances, regulations and standards (LORS) for each resource is provided in Sections 5.1 through 5.16. This section addresses compliance related to the analysis of cumulative effects. The analysis of cumulative impacts of this Project is governed by both federal and state regulations. The Rio Mesa SEGF will comply with all applicable LORS related to cumulative effects as described below and summarized in Table 5.17-2.

**Table 5.17-2  
Laws, Ordinances, Regulations, and Standards (LORS)**

LORS	Requirements	AFC Section Explaining Conformance
<b>Federal Jurisdiction</b>		
NEPA 42 U.S.C. §§ 4321-4347	NEPA establishes a public, interdisciplinary framework for Federal decision-making and ensures that federal agencies take environmental factors into account when considering federal actions.	Section 5.17.2.1
<b>State Jurisdiction</b>		
Warren-Alquist State Energy Resources Conservation and Development Act, California Public Resources Code, §§ 25000, et seq.	Gives the California Energy Commission (CEC) licensing authority in lieu of state, regional, and local permits and requirements.	Section 5.17.2.2
CEQA California Public Resources Code §§ 21083 et seq.	Requires State agencies, including local governments, to evaluate the environmental consequences of their discretionary actions.	Section 5.17.2.2
<b>Local</b>		
No applicable LORS.		

Source: National Environmental Policy Act of 1969, 42 USC §§ 4331 et seq.; Council on Environmental Quality Regulations for Implementing NEPA, 40 CFR §§ 1500 et seq.; California Environmental Quality Act, California Public Resources Code §§ 21083 et seq.; California Code of Regulations, Title 14, Division 6, Chapter 3, §§ 15000–15387.

Acronyms:

- CEQA = California Environmental Quality Act
- LORS = laws, ordinances, regulations, and standards
- N/A = not applicable
- NEPA = National Environmental Policy Act of 1969
- Pub L. = Public Law
- USC = United States Code

### **5.17.2.1 Federal**

#### ***National Environmental Policy Act of 1969***

NEPA establishes a public, interdisciplinary framework for Federal agencies reviewing projects under their jurisdiction to consider environmental impacts. NEPA’s basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment.

The BLM, as lead Federal agency for the Project, is responsible for preparation of an Environmental Impact Statement (EIS) in compliance with NEPA to evaluate the environmental impacts of the portions of the Rio Mesa SEGF on federal lands. The Rio Mesa Solar III plant and the Project gen-tie line are located on lands administered and managed by the BLM. NEPA compliance is required for these portions of the Project through preparation of a Draft and Final EIS. BLM is also responsible for Native American consultation, including government to government consultation.

At the federal level, the NEPA implementing regulations require that all federal agencies consider the cumulative effects of their actions on the environment. As defined under NEPA, “cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).” CEQ regulations for implementing NEPA require that agencies analyze the direct, indirect, and cumulative effects of a proposed action and any reasonable alternatives to that proposed action (40 CFR 1502.16, 1508.25, and 1508.27[b][7]).

### **5.17.2.2 State**

#### ***Warren-Alquist Act***

The California Public Resources Code (PRC) establishes the CEC as the decision-making authority over land use decisions and environmental determinations during the AFC process. This is in accordance with the Warren-Alquist Act, codified in §§ 25000 et seq. of the PRC. The CEC has exclusive jurisdiction over thermal power plant siting (50 MW or greater), including CEQA implementation. The Project will demonstrate conformity with state, regional, and local laws, including land use laws.

Under the Warren-Alquist Act, the CEC’s licensing process is legally equivalent to CEQA and is guided by CEQA regulations.

#### ***California Environmental Quality Act***

The CEC will be the lead agency enforcing CEQA for the Project. Under California law, the CEC is responsible for reviewing the AFCs filed for projects, and also has the role of lead agency for the environmental review of these projects under CEQA (PRC, §§ 25500 et seq.; PRC, §§21000 et seq.). The CEC conducts this review in accordance with the administrative adjudication provisions of the Administrative Procedure Act (5 United States Code, §§ 500 et. seq.) and its own regulations governing site certification proceedings (CCR, Title 20, §§ 1701 et seq.). These provisions require the staff to conduct an independent analysis of AFCs and prepare an independent assessment of a project’s potential environmental impacts, feasible mitigation measures, and alternatives as part of this process.

The CEC considers the Staff Assessment(s), along with the environmental analysis provided by the Applicant, as well as input from interested local, regional, State, and Federal agencies, intervenors, and interested Native American tribes, in developing its final decision on whether to issue a license for a proposed project. The CEC has a certified regulatory program under CEQA that exempts the agency from having to draft an Environmental Impact Report (EIR) and, instead, requires a Final Staff Assessment (FSA), evidentiary hearings, and a decision based on the hearing record, which includes the staff's and other parties' assessments.

At the state level, CEQA (California Public Resources Code [PRC] 21083) and associated CEQA Guidelines (California Code of Regulations [CCR] 15130) require that the discussion of cumulative effects be “guided by the standards of practicality and reasonableness” (PRC 21083[b]), and that “the discussion include a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts” (CCR 15130[b][1][A]). The CEQA guidelines require that cumulative effects be discussed when they are significant, and that the discussions of cumulative effects reflect the severity of the effects and their likelihood of occurrence.

### **5.17.2.3 Local**

There are currently no applicable local LORS for analyzing cumulative effects.

### **5.17.3 Affected Environment**

In order to analyze the affected environment, the movement and transportation of materials and energy must be considered. To determine the cumulative effects of projects on the social environment, it is necessary to obtain information regarding human populations, economic and health indicators, and infrastructure requirements. For this reason, different spatial boundaries may exist for different environmental resources included in the analysis. Factors to consider include:

- the size and nature of the Project and its anticipated effects;
- the availability of existing data and knowledge about the Project and its environmental effects;
- the feasibility of collecting new data and knowledge;
- the size, nature, and environmental effects of past, existing, and future projects and activities in the area;
- the characteristics and sensitivity of the receiving environment (extent and degree of existing stress);
- relevant ecological boundaries (watersheds, major ecological features, etc.); and
- relevant jurisdictional boundaries.

The CEC's Rules of Practice and Procedure and Power Plant Site Certification Regulations relative to cumulative effects differ by discipline. NEPA's regulations relating to cumulative effects do not define specific radii for cumulative effects to be assessed. For this Project, cumulative effects have been considered within a regional perspective, including linear and ancillary features associated with and

considered part of the Project. The study areas for the cumulative effects analyzed differ among resource areas, as appropriate to each resource. This approach is based on guidance from the CEC and BLM and further described in Section 5.17.5.

### **5.17.3.1 Environmental Setting and Past Actions**

As described in greater detail in Section 5.6 of this AFC, the Project is located in a sparsely populated area in the southeastern portion of unincorporated Riverside County. The Project is located in the Palo Verde Valley partially on private land and partially on public land administered by the BLM. The project site is roughly bounded by the existing Imperial Irrigation District transmission line and the Western Area Power Administration (WAPA) transmission line to the northwest and east, respectively. The existing TransCanada Gas Transmission Company (TCGT) North Baja Transmission Line borders the site on the east. Bradshaw Trail intersects the project site at an east-west orientation. The Colorado River forms the border between eastern Riverside County and La Paz County, Arizona, approximately five miles to the east.

The closest community to the project site is Palo Verde, which is approximately 2.3 miles east of the southeast corner of the project site in the northeastern corner of Imperial County, on the southern border of Riverside County. According to the 2010 U.S. Census, Palo Verde had a population of 171 in 2010 (Census 2010). Apart from the approximately 640 acres that encompasses Palo Verde, the northeastern portion of Imperial County within the project vicinity primarily consists of recreation and previously disturbed lands, the Chocolate Mountain Aerial Gunnery Range (CMAGR) as well as agriculture lands adjacent to the Colorado River. The CMAGR is located approximately 16 miles southwest of the Project.

The western portion of La Paz County, Arizona, which is in the project vicinity, is very sparsely populated. It is primarily comprised of Colorado River Indian Tribe land, the U.S. Military-owned Yuma Proving Grounds, BLM-administered land, and wildlife refuges adjacent to the Colorado River. A relatively small amount of privately-owned land is located north of the Cibola National Wildlife Refuge. The nearest community to the project site in La Paz County is the town of Quartzsite, approximately 20 miles east of the city of Blythe. The population of Quartzsite was 3,677 in 2010. The community of Ripley, located along State Route 78 is 6.8 miles from the project site. According to the 2010 U.S. Census, Ripley had a population of 692 in 2010. The city of Blythe is the nearest city to the project site, located approximately 13 miles to the northeast. The population of Blythe was 20,817 in 2010.

Portions of the project vicinity are managed under the BLM California Desert Conservation Area Resource Management (CDCA) Plan (BLM 1980, as amended), including the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan, which amended the CDCA Plan. The NECO planning area encompasses over 5 million acres and hosts 60 sensitive plant and animal species. Lands within the planning area also are popular for hiking, hunting, rockhounding, and driving for pleasure. Several commercial mining operations, livestock grazing lands, and utility transmission lines exist in the area as well. In addition, the Palo Verde Valley Area Plan (Area Plan), an extension of the Riverside County General Plan (RCGP), guides the character of the valley. The Area Plan is bounded by Imperial County to the south, previously disturbed desert lands to the north and west, and the Colorado River to the east.

Existing land uses surrounding the Project consist primarily of previously disturbed land and agricultural land, including important farmlands designated by the California Department of Conservation Farmland Mapping and Monitoring Program and Riverside County. The Palo Verde Valley is well known for its agricultural land, with the areas surrounding Blythe and Ripley being heavily farmed. Agriculture is the major economic activity in the Palo Verde Valley.

Although primarily characterized by previously disturbed land and agricultural land, there is some urban and rural development in the project vicinity, including very-low-density residential dwellings. The nearest commercial and industrial land uses are located in the city of Blythe. Blythe Municipal Airport is located approximately 4.7 miles north of the project site. The Chuckwalla and Ironwood State Prisons, situated approximately 15 miles west of Blythe, are located in a non-contiguous island of the city of Blythe. The prisons are one of the major sources of employment in the Palo Verde Valley and, combined, house approximately 8,000 inmates and employ a staff of approximately 2,000. The Blythe Energy Project is an operational 520 MW, base-load, natural gas-fired combined-cycle power plant located in the city of Blythe. Multiple utility transmission lines and substations are located in the project vicinity. Transportation infrastructure in the project vicinity includes Interstate 10 (I-10) to the north and State Route 78 to the west.

The U.S. Fish and Wildlife Service (USFWS) Cibola National Wildlife Refuge is located approximately five miles south of the project site. The BLM administers four wilderness areas, two long-term visitor areas, three areas of critical environmental concern (ACECs), and other recreational areas and opportunities within approximately 20 miles of the project site. Riverside County and the City of Blythe oversee several recreation areas, parks, and wildlife areas within the project vicinity. The project site is located within the Chocolate-Mule Mountains Herd Area. The Chocolate-Mule Mountains Herd Management Area is approximately 10 miles south of the project site. Table 5.17-3 provides a summary of past actions that have contributed to the existing environmental conditions within the project vicinity and the resources that may have been affected.

**Table 5.17-3  
Past Actions within the Project Vicinity**

Action	Resource(s) Potentially Effected	Mechanism(s) of Potential Effect
OHV use	Air, Soil, Wildlife, Cultural, Paleontological, and Vegetation	Dust/particulates, erosion, noise, and disturbance
Agriculture	Air, Soil, Geology and Minerals, Wildlife, Cultural, Paleontological, Water Resources, Vegetation, Visual, and Hazardous Materials	Dust/particulates, erosion, noise, sediment runoff, disturbance, water pollution due to pesticides, and groundwater contamination
Mining	Air, Soil, Geology and Minerals, Wildlife, Human Health, Water Resources, Vegetation, Cultural, Paleontological, and Visual	Dust/particulates, erosion, noise, sediment runoff, disturbance, vehicular runoff (e.g., petroleum products), habitat fragmentation, and wildlife mortality/injury (e.g., vehicular collisions)

**Table 5.17-3  
Past Actions within the Project Vicinity**

<b>Action</b>	<b>Resource(s) Potentially Effected</b>	<b>Mechanism(s) of Potential Effect</b>
Power Generation, Transmission, and Distribution	Air, Soil, Geology and Minerals, Wildlife, Cultural, Paleontological, Vegetation, Visual, and Hazardous Materials	Dust/particulates, erosion, noise, sediment runoff, disturbance, vehicular runoff (e.g., petroleum products), habitat fragmentation, and wildlife mortality/injury (e.g., vehicular collisions)
Highways and roads	Air, Soil, Geology and Minerals, Wildlife, Human Health, Water Resources, Vegetation, Cultural, Paleontological, and Visual	Dust/particulates, erosion, noise, sediment runoff, disturbance, vehicular runoff (e.g., petroleum products), habitat fragmentation, and wildlife mortality/injury (e.g., vehicular collisions)
Urban development (e.g., housing, commercial, industrial, parks, urban infrastructure, airport, prisons)	Air, Soil, Geology and Minerals, Wildlife, Human Health, Water Resources, Vegetation, Cultural, Paleontological, Visual, and Hazardous Materials	Dust/particulates, erosion, noise, sediment runoff, disturbance, vehicular runoff (e.g., petroleum products), habitat fragmentation, wildlife mortality/injury (e.g., vehicular collisions), and groundwater contamination

Source: URS Corporation, 2011.

Acronym:

OHV = off-highway vehicle

#### **5.17.4 Environmental Consequences**

The following sections discuss the potential environmental consequences associated with the proposed Project and other projects in the vicinity of the project site.

##### **5.17.4.1 Present and Reasonably Foreseeable Future Actions**

Federal, state, and local government policies call for increased development of renewable sources of electricity. In 2009, the latest year for which data is available from the CEC, 11.6 percent of all electricity came from renewable resources. California Senate Bill X1 2 (Simitian 2011) requires 33 percent of the State’s electricity to come from renewable energy sources by December 31, 2020. At the federal level, the Energy Policy Act of 2005 (Title II, Section 211) establishes a goal for the Secretary of the Interior to approve 10,000 MWs of electricity from non-hydropower renewable energy projects located on public lands (Energy Policy Act 2005). Secretarial Order 3285A1 establishes the development of environmentally responsible renewable energy as a priority for the BLM (DOI 2010). In addition, the Multi-Purpose Open Space Element of the Riverside County General Plan includes a policy that development of renewable resources should be encouraged (County of Riverside 2008).

##### **California Desert Conservation Area and La Paz County, Arizona**

The following discussion is provided to satisfy NEPA requirements regarding cumulative effects. As a result of these policy drivers, among other economic and environmental factors, a significant number of right-of-way (ROW) applications for solar energy projects in the California desert are currently being processed. Other renewable energy projects (e.g., wind) also are being considered. As of September 19,

2011, there were 23 pending ROW applications for solar energy development with first-in-line status and 31 pending ROW applications for wind energy development with first-in-line status on BLM-administered public lands within the CDCA (see Figure 5.17-1). Pending ROW applications for solar energy developments account for approximately 166,285 acres and pending ROW applications for wind energy developments account for 264,399 acres, for a total of approximately 713,013 acres within the CDCA that may potentially be developed for alternative energy projects.

The BLM has authorized five solar energy projects in the CDCA, accounting for approximately 32,256 acres. One additional project, the Blythe Solar Power Project, was previously authorized but has been temporarily suspended due to a technology change. The 30 BLM-authorized wind energy projects in the CDCA account for approximately 250,073 acres. An additional project of note within the CDCA is the Proposed West Chocolate Mountains Renewable Energy Evaluation Area, in which the BLM will prepare an Environmental Impact Statement (EIS) to consider an amendment to the CDCA Plan identifying whether lands within the West Chocolate Mountains area should be made available for geothermal, solar, or wind energy development. Comments on the Draft EIS for this project are due on September 29, 2011.

In addition to projects within the CDCA, as of September 23, 2011, there were 12 pending ROW application for solar energy developments on BLM-administered public lands within La Paz County, Arizona, which borders Riverside and Imperial Counties to the east of the Colorado River. These applications account for approximately 247,414 acres of land. According to the BLM, only one of these applications (AZA 34666) is considered an active project progressing through the ROW approval process (BLM 2011e). There were no pending BLM ROW applications for wind energy development in La Paz County as of September 23, 2011.

The Applicant understands that this large number of applications has raised some public concerns about the potential cumulative effects of solar energy development throughout the California desert. However, it is highly improbable that more than a small percentage of these projects will be developed within the next decade. The State mandate to develop renewable energy and solicitations for renewable energy sales by California utilities has spurred interest in solar sites. However, although many proposals have been received by the utilities, few have resulted in power purchase agreements approved by the California Public Utilities Commission (CPUC). In addition, obtaining transmission interconnection, required permits, and financing are serious hurdles, so that only a small number of projects are likely to achieve commercial operation. The CEC's 2006 *Integrated Energy Policy Report Update* stated that, nationwide, over half of renewable contracts have failed and that "project delays have affected 94 percent of SCE projects and 72 percent of San Diego Gas & Electric Company projects." (CEC 2006.) Thus, it is unlikely that many of these applications will result in commercial projects.

The 2006 *Solar Task Force Report* to the Western Governors' Association examined State mandates for renewable energy, including state and federal incentives for renewable project development, forecasted electricity load growth, solar resources, transmission, and solar technology capability (WGA 2006). The report concluded that two gigawatts (GW) of central station power would be deployed in California by 2015. Such a deployment would require approximately 20 to 25 square miles of land (12,800 to 16,000 acres). Even if all of the GW of central station power predicted for California were located on BLM land within the CDCA, it would use only 0.05 to 0.06 percent of the CDCA's 25 million acres.

The U.S. Department of Energy (DOE) and BLM are jointly preparing a Solar Energy Programmatic Environmental Impact Statement (Solar PEIS) (DOE 2011). This Solar PEIS is a prelude to permitting or sponsoring large-scale solar electricity-generating installations in the western United States., including the southern California desert. The BLM and DOE are evaluating whether installations of large-scale solar electric power plants on public lands could be facilitated by developing agency-specific programs that establish environmental policies and mitigation strategies for this solar development.

The Solar PEIS will evaluate two alternative approaches to solar development: a No Action alternative and a Facilitated Development alternative. Under the No Action alternative, the BLM and DOE would continue to evaluate solar energy project proposals on a case-by-case basis. For the Facilitated Development alternative, the agencies intend to create a 20-year forecast of reasonably foreseeable solar energy development. With the Solar PEIS, the agencies intend to establish siting criteria and best management practices (BMPs), which would minimize potential impacts to natural and cultural resources. The Solar PEIS will also consider whether new transmission corridors are needed on BLM-managed land to interconnect solar electric facilities to the grid.

Twenty four proposed solar energy zones (SEZs) are analyzed as priority development areas for utility-scale solar energy facilities under the SEZ program alternative in the PEIS. Under the BLM's solar energy development program alternative, a subset of the lands that would be available for ROW application would be identified as SEZs. A SEZ is defined by the BLM as an area with few impediments to utility-scale production of solar energy where BLM would prioritize solar energy and associated transmission infrastructure development. Under the SEZ program alternative, only the lands within the proposed SEZs would be available for ROW application.

### ***Project Vicinity***

Regarding the geographic scope of this analysis, each resource is evaluated for cumulative effects on a regional scale in accordance with CEQA and NEPA guidance. The incremental effects of the Project are being considered in combination with past, present and reasonably foreseeable renewable energy and other projects causing related impacts. A similar regional approach is used in the evaluation of all resources, as further discussed by resource area in Section 5.17.5.

While a regional cumulative effect review is conducted for each resource area, a boundary for considering reasonably foreseeable future projects was necessary. As discussed above, although there are dozens of pending projects within the larger CDCA planning region, those within the vicinity of the Rio Mesa SEGF were considered for the purposes of this evaluation. For the purposes of this section, the project vicinity is considered eastern Riverside County, southeastern San Bernardino County, northeastern Imperial County, and western La Paz County, Arizona. The project vicinity is generally bounded by southeastern San Bernardino County near the border with Riverside County to the north, U.S. Highway 95 in Arizona to the east, the CMAGR to the south-southwest, and Joshua Tree National Park to the west-northwest. However, the boundary of cumulative effects will vary by environmental resource and system and may extend beyond, or be more limited than, these general boundaries. This method of comparison is consistent with guidance by both the CEC and BLM.

Table 5.17-4 identifies authorized and pending BLM applications for solar and wind energy development with first-in-line status within the project vicinity. The locations of these applications are shown on

Figure 5.17-2 using readily available GIS data from the BLM. The locations of other potential projects in the project vicinity, while not shown on Figure 5.17-2, are described below in Tables 5.17-5 and 5.17-6.

As of September 23, 2011, there are 20 solar energy developments accounting for approximately 183,720 acres within the project vicinity: 17 pending applications accounting for approximately 170,143 acres, two authorized applications accounting for approximately 6,196 acres, and one temporarily suspended application due to a technology change accounting for 7,381 acres. Five of the pending solar projects are located in La Paz County, Arizona, with 17 pending applications, two authorized projects, and one temporarily suspended application located in the CDCA.

The seven wind energy applications within the project vicinity account for approximately 68,496 acres within the CDCA: four pending applications account for approximately 48,877,514 acres and three authorized applications account for approximately 19,619 acres.

**Table 5.17-4  
Pending and Authorized BLM Applications for Solar and Wind Energy Development  
within the Project Vicinity**

Serial Number	Applicant or Holder/Billee	Applicant or Holder/ Billee Address	Acres	Case Disposition	Date Application Received	Remarks
<b>Solar Energy Projects, CDCA</b>						
CACA 048649	Desert Sunlight Holdings, LLC	1111 Broadway Fl 4th Oakland, CA 94607	4,244	Authorized 8/9/11	11/7/06	Desert Sunlight, 550-MW Solar PV
CACA 048728	NextEra Energy Resources, LLC	700 Universe Blvd. Juno Beach, FL 33408	7,771	Pending	1/31/07	Genesis McCoy, up to 500 MW Solar PV; POD submitted. NOI published 8/29/11.
CACA 048808	Chuckwalla Solar I, LLC / Lees BC; BCL & Associates, Inc.	15690 Vista Circle Desert Hot Springs, CA 92241	4,099	Pending	9/15/06	Chuckwalla Solar, 200 MW Solar PV; POD submitted.
CACA 048810	Palen Solar I, LLC / Chevron Energy Solutions Co.	150E W Colorado Blvd., Ste 360 Pasadena, CA 91105	5,213	Pending; pre-construction status	3/14/07	Palen Solar Power Project, 484 MW Thermal Trough; FEIS/ Plan Amendment & NOA published 5/11/11.

**Table 5.17-4  
Pending and Authorized BLM Applications for Solar and Wind Energy Development  
within the Project Vicinity**

Serial Number	Applicant or Holder/Billee	Applicant or Holder/ Billee Address	Acres	Case Disposition	Date Application Received	Remarks
CACA 048811	Palo Verde Solar I, LLC	1625 Shattuck Ave., Suite 270 Berkeley, CA 94709	7,381	Notice of Temporary Suspension Due to Technology Change Issued 8/23/11	3/16/07	Blythe Solar Power Project, 1,000 MW Solar PV; amended SF-299 submitted 8/29/11.
CACA 048880	NextEra Energy Resources, LLC/Boulevard Associates, LLC	700 Universe Blvd. Juno Beach, FL 33408	1,952	Authorized 11/4/10; under construction	1/31/07	Genesis Solar Energy Project, 250 MW Thermal Trough.
CACA 049397	First Solar Development, Inc.	1111 Broadway Fl 4th Oakland, CA 94607	7,294	Pending	9/28/07	Desert Quartzite, 600 MW Solar PV; POD submitted.
CACA 049488	EnXco, Inc.	PO Box 581043 N. Palm Springs, CA 92258	2,058	Pending	11/13/07	Mule Mountain Soleil, 200 MW Solar PV. No activity from applicant since April 2010. Withdrawal request letter sent 5/16/11.
CACA 049490	EnXco, Inc.	PO Box 581043 N Palm Springs, CA 92258	12,837	Pending	11/13/07	McCoy 300 MW Solar PV; POD submitted.
CACA 049491	EnXco, Inc.	PO Box 581043 N Palm Springs, CA 92258	1,327	Pending	11/13/07	Desert Harvest, 300 MW Solar PV; POD submitted.
CACA 049615	Pacific Solar Investments, LLC	1125 NW Couch Street, #700 Portland, OR 97209	10,881	Pending	9/4/07	Ogilby Solar; 1,500 MW Solar Thermal Trough; revised POD 8/26/11.
CACA 050390	EnXco, Inc.	PO Box 581043 N Palm Springs, CA 92258	7,724	Pending	8/13/08	Mule Mountain, 200 MW Solar PV.
CACA 051950	Ridgeline Energy, LLC	1300 N Northlake Way, Floor 2 Seattle, WA 98103	2,503	Pending	3/3/10	Gypsum Solar; solar test equipment and possible 50-100 MW Solar PV.

**Table 5.17-4  
Pending and Authorized BLM Applications for Solar and Wind Energy Development  
within the Project Vicinity**

Serial Number	Applicant or Holder/Billee	Applicant or Holder/ Billee Address	Acres	Case Disposition	Date Application Received	Remarks
CACA 051967	BrightSource Energy	1999 Harrison Street Ste 500 Oakland, CA 94612	6,623	Pending	5/12/09	Sonoran West; 1,000 MW DPT Tower.
CACA 052344	Ridgeline Energy, LLC	1300 N Northlake Way, Floor 2 Seattle, WA 98103	259	Pending	9/27/10	Desert Center II, 20 MW Solar PV and Test Equipment. Draft PEIS 3/17/11.
<b>Wind Energy Projects, CDCA</b>						
CACA 047751	Oro Valley Power, LLC	421 SW 6th Ave. Ste 1000 Portland, OR 97204	11,327	Authorized	1/23/07	Black Mountain.
CACA 048272	Imperial Wind	11101 W 120th Ave. Ste 400 Broomfield, CO 80021	2,036	Authorized	9/29/09	Black Mountain.
CACA 052856	Graham Pass, LLC	190 S La Salle Street Ste 2040 Chicago, IL 60603	32,824	Pending	4/20/09	Graham Pass.
CACA 051062	John Deere Renewables, LLC	6400 NW 86th Street Johnston, IA 50131	6,256	Authorized	9/21/10	Milpitas.
CACA 051664	L.H. Renewables, LLC	PO Box 54 Redlands, CA 92373	2,690	Pending	12/8/09	Eagle Mountain.
CACA 052078	Imperial Wind, LLC	11101 W 120th Ave. Ste 400 Broomfield, CO 80021	2,036	Pending	5/28/10	Black Mountain Wind, 48-65 MW.
CACA 052435	Oro Valley Power, LLC	421 SW 6th Ave. Ste 1000 Portland, OR 97204	11,327	Pending	12/10/10	180 MW Wind Energy Project.
<b>Solar Energy Projects – Yuma and Lake Havasu Field Offices, La Paz County, Arizona</b>						
AZA 34335	Boulevard Associates, LLC	700 Universe Blvd. June Beach, FL 33408	24,268	Pending	6/8/07	Bouse; 500 MW and (2) 250 MW CSP Trough. Bouse area.

**Table 5.17-4  
Pending and Authorized BLM Applications for Solar and Wind Energy Development  
within the Project Vicinity**

Serial Number	Applicant or Holder/Billee	Applicant or Holder/ Billee Address	Acres	Case Disposition	Date Application Received	Remarks
AZA 34427	Pacific Solar Investment	1125 NW Couch Street, #700 Portland, OR 97209	34,618	Pending	9/6/07	La Posa Solar Thermal; 2,000 MW CSP Trough. South of Quartzsite in Stone Cabin area, east and west sides of U.S. 95.
AZA 34554	NextLight Renewable Power, LLC	353 Sacramento Street, #2100 San Francisco, CA 94111	20,777	Pending	3/26/08	Quartzsite; 500 MW CSP Trough. South of Quartzsite. POD 12/08.
AZA 34666	Quartzsite Solar Energy, LLC	425 Olympic Blvd. Suite 500E Santa Monica, CA 90404	9,863	Pending	5/27/08	Quartzsite; 600 MW CSP Trough. North of Quartzsite. POD 11/19/08.
AZA 34936	Wildcat Quartzsite, LLC.	1999 Harrison Street Ste 500 Oakland, CA 94612	12,028	Pending	1/28/09	Wildcat Quartzsite, 800 MW CSP Tower.

Sources: BLM 2011b; BLM 2011c; CEC 2011a.

Acronyms:

BLM = United States Bureau of Land Management  
 CSP = concentrating solar power  
 DPT = distributed power tower  
 FEIS = Final Environmental Impact Statement

MW = megawatt  
 NOA = Notice of Application  
 POD = Plan of Development  
 PV = photovoltaic  
 U.S. = United States

In addition to pending and authorized BLM ROW applications for solar and wind energy projects, present and reasonably foreseeable future projects within the project vicinity that have been evaluated for cumulative effects include the following:

- additional potential energy projects in the project vicinity (including solar, non-renewable, transmission line, substation, and pipeline projects (Table 5.17-5); and
- potential projects in the city of Blythe (Table 5.17-6).

With one exception, a permit application has been submitted for all projects identified in the following tables. No other proposed or reasonably foreseeable projects have been identified in the portions of Riverside, Imperial, and La Paz counties within the project vicinity, including unincorporated towns (La Paz County 2011; County of Imperial 2011; County of Riverside 2011a, 2011b).

**Table 5.17-5  
Additional Potential Energy Projects within the Project Vicinity**

Case/Permit	Location	Description of Proposed Development	Acreage
<b>Solar Energy Projects</b>			
Riverside County, CUP No. CUP03671	Riverside County: North of I-10, South of McCoy Wash, East of McCoy Mountains, West of Blythe Airport. (APNs: 812-130-006, 812-130-007; 812-130-008.)	McCoy Solar, LLC proposes to develop a 46 MW solar PV power plant on private land within an overall 500 MW BLM solar power plant project (CACA 048728)  Status of DRT (Land Development Committee) as of 9/23/11.	471 acres of private land.
Riverside County, CUP No. CUP03670	Riverside County: South of 18th Ave., North of 10th Ave., West of Haig Cr., East of Neighbors Blvd.	485 MW solar PV electrical generating facility  Status of DRT (Land Development Committee) as of 9/23/11.	Not available.
Riverside County/CACA 051022	Riverside County: about 40 miles north of Blythe.	Rice Solar Energy Project, 150 MW Solar Thermal on private land. 230 kV line would cross BLM land and interconnect with WAPA Parker-Blythe #2 transmission line. FEIS NOA published 8/5/11.	Approximately 1,400 acres of private land, with 230 kV across BLM land.
Riverside County	Riverside County: northeast portion of the Blythe Municipal Airport, east of the Blythe PV Project.	U.S. Solar, Blythe Airport Solar I Project, 100 MW Solar PV (20 MW initial phase with potential build-out up to 100 MW)	640 acres of airport property (initial 120-acre lease with option to lease an additional 120 acres).
<b>Non-Renewable Energy Projects</b>			
FERC 13123-002	Riverside County: the site of the Eagle Mountain iron ore mine north of Desert Center.	Eagle Crest Energy Co., Eagle Mountain Pumped Storage Project, 1,300 MW hydroelectric, including 13.5-mile transmission line to SCE Red Bluff Substation near Desert Center.	Not available.
02-AFC-1	Riverside County: Hobsonway & Buck Boulevard, about five miles west of Blythe, California	Blythe Energy Project Phase II, 520 MW combined cycle power plant. Status: on-hold.	76 acres adjacent to existing Blythe Energy Project.
<b>Transmission Lines and Substations</b>			
CPUC Application No. A.05-04-015/ CACA 048771	Riverside County: from Blythe, CA, generally east along I-10 to western Riverside County	Devers-Palo Verde No. 2 500 kV Transmission Line Project, includes new 500/220 kV CRS near Blythe; new 111-mile 500 kV transmission line between the SCE Devers Substation near Palm Springs and the new CRS. The line would be parallel to the existing Devers-Palo Verde transmission line; and a new 42-mile 500 kV transmission line between Devers Substation and the SCE Valley Substation in Menifee. ROD issued July 2011. Construction is expected to begin in 4th quarter 2011 and complete and in service by 3rd quarter 2013.	Not available.
99-AFC-8C	Riverside County: near the Blythe Energy Project	Blythe Energy Project Transmission Line, 74.1 miles of new 230 kV transmission line on concrete poles	Not available.

**Table 5.17-5  
Additional Potential Energy Projects within the Project Vicinity**

Case/Permit	Location	Description of Proposed Development	Acreage
	in Blythe, CA.		
BLM	Riverside County: near the Blythe Energy Project to the existing Devers Substation approximately 10 miles north of Palm Springs, CA.	Desert Southwest Transmission Project, 500 kV Transmission Line, 118 miles of 500 kV transmission line. ROW grant approved by BLM Palm Springs-South Coast Field Office. Plans for development are being finalized with a possible near-term start date for construction.	Approximately 4,290 acres of ROW.
CPUC 10-11-012	Riverside County: near Desert Center	500/220 kV Red Bluff Substation	Approximately 75 acres.
Riverside County, Public Use Permit No. PUP00909	Riverside County: North of I-10, West of Desert Center Rd.	Construct Transmission (gen-tie) line for 550 MW Solar Generation Facility.  Status of Tentatively Approved as of 9/23/11.	Not available.
<b>Pipeline Projects</b>			
CACA 051203	Riverside County: approximately 25 miles west of Blythe, in the Sonoran Desert. McCoy Mountains to the east, the Palen Mountains to the north, and Ford Dry Lake, a dry lakebed, to the south. BLM land.	Six-mile, eight-inch-diameter natural gas pipeline for the Nextera Genesis Solar Energy Project (CACA 048880)	Not available.

Sources: BLM 2010; SCE 2011; CEC 2011b; County of Riverside 2011a, 2011b, 2011c; BLM 2010.

APN = Assessor's Parcel Number

BLM = United States Bureau of Land Management

CPUC = California Public Utilities Commission

CRS = Colorado River Substation

CUP = conditional use permit

I-10 = Interstate 10

IID = Imperial Irrigation District

kV = kilovolt

MW = megawatt

PV = photovoltaic

ROW = right-of-way

SCE = Southern California Edison

U.S. = United States

WAPA = Western Area Power Administration

**Table 5.17-6  
Potential Projects in the City of Blythe**

Permit	Status	Location	Project Description	Acreage
PP2011-01 (Plot Plan), ZC/GPA 2011-01 (Zone Change and General Plan Amendment).	Approved.	City of Blythe: Southeast corner of Hobsonway and Neighbours Blvd. (APN: 824-170-018 and 824-170-020).	Site Plan, General Plan Amendment, and Zone Change entitlements to allow construction of a site as a commercial complex and RV park combination.	13.44 acres
PRC 2011-03 (Project	Staff level review; no formal	City of Blythe: West	Temporary Batch Plant.	Not available.

**Table 5.17-6  
Potential Projects in the City of Blythe**

Permit	Status	Location	Project Description	Acreage
Review Committee). This project has yet to file an application for land use and is still at the staff level of review.	application for entitlements has been submitted as of August 2, 2011. However, staff anticipates applicant will submit application(s) for entitlements in the foreseeable future.	side of Neighbours Blvd. just south of Hobsonway.		
Not applicable.	Currently on-hold due to uncertainty surrounding redevelopment agency funds; project would be financed with redevelopment dollars.	City of Blythe: Mesa Bluff golf course area.	Provision of sewer line to area currently served by failing community septic system.	Not available.

Sources: City of Blythe, 2011.

Acronyms:

APN = Assessor’s Parcel Number

RV = recreational vehicle

In addition to the type and number of projects, it is important to note project sequence relative to this cumulative effects study. The baseline for this analysis consists of existing development as a result past projects in the project vicinity. The future baseline includes proposed projects likely to occur before, concurrent with, and after the Rio Mesa SEGF.

Future renewable energy projects within the project vicinity likely to occur before or concurrent with the Rio Mesa SEGF include Rice Solar Energy Project (RSEP), Palen Solar Power Project (PSPP), Desert Sunlight Solar Farm (DSSF), Genesis Solar Energy Project (GSEP), and Blythe Solar Power Project (BSPP). BSPP was previously authorized but has been temporarily suspended due to a technology change. Each of these projects has issued a Notice of Intent (NOI) to publish an EIS or a Federal Register Notice of Availability (NOA) of environmental documents. The Devers-Palo Verde No. 2 transmission line including the new SCE CRS is expected to be constructed before the Project.

A general analysis was performed of many of the other renewable energy and other projects in the area because of the lack of certainty regarding which will occur before, concurrent with, and after the Rio Mesa SEGF. Most of these projects have not advanced to the point where sufficient information is available to evaluate their potential to create environmental impacts in the project vicinity. Additionally, it is likely that some currently proposed projects will be developed after the Rio Mesa SEGF. The Project will be included in the environmental baseline of those projects. Therefore, the cumulative effects of the Rio Mesa SEGF will likely be considered where appropriate during the individual project regulatory review for such future projects developed after the Project.

A brief description of each reasonably foreseeable project within the project vicinity is provided below.

**Desert Sunlight Solar Farm**

First Solar Development, Inc. (First Solar) proposes to construct and operate a 550 MW solar photovoltaic (PV) power plant project known as the Desert Sunlight Solar Farm (DSSF). The DSSF would include three main components 1) the Solar Farm site, 2) a transmission line, and 3) a Southern California Edison (SCE) owned and operated substation, Red Bluff Substation.

The Solar Farm site is on land administered by the BLM six miles north of the rural community of Desert Center, which is adjacent to the I-10 freeway in eastern Riverside County, California. The BLM case file number is CACA 048649.

The Project includes a 230 kV transmission line that would extend south from the Solar Farm site and interconnect to the planned Red Bluff substation near I-10. The Red Bluff Substation would interconnect with the existing SCE Devers-Palo Verde 1 transmission line. The three main project components will require a total of about 4,410 acres – 4,090 acres for the Solar Farm, 230 acres for the transmission corridor, and 90 acres for the substation. The information provided in Section 5.17.5 about the potential environmental impacts of the DSSF is taken from the California Desert Conservation Area Plan Amendment and Final Environmental Impact State prepared for the BLM (BLM 2010d)

**Rice Solar Energy Project**

Rice Solar Energy, LLC proposes to construct a 150 MW solar-powered electrical generation facility in eastern Riverside County, Calif., approximately 40 miles from Blythe, 65 miles from Needles, and 75 miles from Twentynine Palms. The proposed solar generation facility would be located on the site of a former airfield (Rice Army Airfield) that was used during World War II as a training site, later transferred to private use, and then abandoned sometime between 1955 and 1958.

The proposed Project would use concentrating “power tower” technology to capture the sun’s heat to make steam, which would power traditional steam turbine generators. The solar generation facility would contain the power block, a central receiver or tower, solar fields which consist of mirrors or heliostats to reflect the sun’s energy to the central tower, a thermal energy storage system, technical and non-technical buildings, a storm water system, two onsite water wells, water supply and treatment system, a wastewater system, evaporation ponds, and other supporting facilities. These facilities would be situated on 1,410 acres within the project parcel and would be surrounded by a site fence. Other Project components would include a new transmission line, a new electrical substation, and an access road.

RSEP has applied to WAPA to interconnect the proposed Project to WAPA’s power transmission system and has applied to the Bureau of Land Management for a right-of-way authorization to construct and operate a transmission line that would interconnect the proposed Project to WAPA’s transmission system. The BLM case file number is CACA 051022. Under California law, the CEC is responsible for reviewing the Applications for Certification filed for thermal power plants over 50 MW, and also has the role of lead agency for the environmental review of such projects under the CEQA.

WAPA and the BLM Palm Springs - South Coast Field Office, together with the CC, are preparing a joint Environmental Impact Statement/Staff Assessment, which may include an amendment to the CDCA. The information provided in Section 5.17.5 about the potential environmental impacts of the RSEP is taken from the CEC Staff Assessment and Draft Environmental Impact Statement (CEC 2010d)

**Palen Solar Power Project**

Solar Millennium, LLC and Chevron Energy Solutions, the joint developers of this project, propose to construct, own, and operate the Palen Solar Power Project. The project would be a concentrated solar thermal electric generating facility with two adjacent, independent, and identical solar plants of 250 MW capacity each for a total capacity of 500 MW.

The project would utilize solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750 degrees Fahrenheit) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

The project site is located approximately 10 miles east of Desert Center, along Interstate-10 (I-10) approximately halfway between the cities of Indio and Blythe, in Riverside County, California. An application has been filed with BLM for a ROW grant of approximately 5,200 acres. The BLM case file number is CACA 048810. The information provided in Section 5.17.5 about the potential environmental impacts of the PSPP is taken from the CEC Commission Decision (CEC 2010c)

**Genesis Solar Energy Project**

Genesis Solar LLC, a Delaware limited liability company and wholly owned subsidiary of NextEra Energy Resources LLC, proposes to construct, own, and operate the Genesis Solar Energy Project. The project would be a concentrated solar electric generating facility that would be located in Riverside County, California.

The project would consist of two independent solar electric generating facilities with a nominal net electrical output of 125 MW each, for a total net electrical output of 250 MW. Electrical power would be produced using steam turbine generators fed from solar steam generators. The solar steam generators receive heated transfer fluid from solar thermal equipment comprised of arrays of parabolic mirrors that collect energy from the sun.

The project site is located approximately 25 miles west of the city of Blythe, California, on lands managed by the BLM. The BLM case file number is CACA 048880. The project is an undeveloped area of the Sonoran Desert. Surrounding features include the McCoy Mountains to the east, the Palen Mountains (including the Palen/McCoy Wilderness Area) to the north, and Ford Dry Lake, a dry lakebed, to the south. Interstate-10 (I-10) is located to the south of the project site. The Chuckwalla Mountains and Little Chuckwalla Mountains Wilderness Areas are also located farther south-southwest. The project area is currently undisturbed, although the area has been used for grazing and off-highway vehicle recreation in the past. Ford Dry Lake was formerly open to the public for off-highway vehicle use but has since been closed. The information provided in Section 5.17.5 about the potential environmental impacts of the GSEP is taken from the CEC Presiding Member's Proposed Decision (CEC 2010b).

**Blythe Solar Power Project**

The Blythe Solar Power Project was previously authorized as a concentrated solar thermal electric generating facility with four adjacent, independent, and identical solar plants of 250 MW nominal capacity each for a total capacity of about 1,000 MW nominal. However, on August 18, 2011, Palo Verde

I, LLC, through Solar Trust of America, announced their intent to change the solar technology from CSP to PV. The BLM ordered temporary suspension of surface disturbing construction activities due to the technology change. The ROW grant holder must file an amended SF299 form to request the technology change. The BLM may list the temporary suspension if appropriate once the requested technology change has been processed in accordance with all applicable laws and regulations.

The project site is located approximately two miles north of U.S. Interstate-10 (I-10) and eight miles west of the City of Blythe in an unincorporated area of Riverside County, California. The Blythe Airport is about one mile south of the site. The applicants have applied for a ROW grant from the BLM for about 9,400 acres of flat desert terrain. The BLM case file number is CACA 048811. The total area that would be disturbed by project construction and operation would be about 7,030 acres. The area inside the project's security fence, within which all project facilities would be located, will occupy approximately 5,950 acres. The information provided in Section 5.17.5 about the potential environmental impacts of the BSPP is taken from the CEC Commission Decision (CEC 2010a).

### **Devers-Palo Verde No. 2 Transmission Line including the New SCE CRS**

Southern California Edison (SCE) proposes to build the Devers-Palo Verde No. 2 transmission line, which will primarily consist of the construction of a new substation and a high-voltage transmission line in an existing transmission corridor. SCE is currently proceeding with construction of the California portion of the project to interconnect new conventional and renewable generation resources in the Blythe area.

The California portion of the Devers-Palo Verde No. 2 transmission line will consist of the following main components: a new 500/220 kilovolt Colorado River Substation near Blythe and a new 111-mile 500 kilovolt transmission line between SCE's Devers Substation near Palm Springs and the new Colorado River Substation. The line would be parallel to the existing Devers-Palo Verde transmission line.

#### ***5.17.4.2 Incomplete and Unavailable Information***

CEQ guidelines require that:

“When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.” (40 CFR 1502.22). In the event there is relevant information, but “the overall costs of obtaining it are exorbitant or the means to obtain it are not known” (40 CFR 1502.22), the regulations instruct that the following items should be included:

- a statement that such information is unavailable,
- a statement of the relevance of such information to evaluate reasonably foreseeable significant adverse effects,
- a summary of existing information that is relevant to evaluating the adverse effects, and
- the agency's evaluation of adverse effects based on generally accepted scientific methods.

Efforts have been made to obtain relevant information, including searching agency databases, reviewing published reports, communicating with agency staff and performing direct surveys; however, some data

gaps still exist related to the unpredictable nature of reasonably foreseeable significant adverse effects or lack of adequate baseline information for a particular resource.

### **5.17.5 Cumulative Effects by Resource**

The following sections describe the cumulative effects of the Rio Mesa SEGF when considered in combination with past, present, and reasonably foreseeable future projects located in the project vicinity, by resource area.

#### **5.17.5.1 Air Quality**

Cumulative air quality impacts are regional and local in nature. As a result, the analysis considers the potential for the incremental air quality effects of the Rio Mesa SEGF to contribute to both regional and localized cumulative air quality impacts. The geographic area of analysis for regional cumulative air quality impacts is Riverside County. The geographic area of analysis for localized air quality impacts is a six-mile radius from the project site.

The incremental contribution of the Rio Mesa SEGF to global climate change also is analyzed in this section. For further details on the cumulative air quality impact analysis performed for the Rio Mesa SEGF please refer to Section 5.1 and the related air quality appendix.

Cumulative air quality impacts at the regional level are possible for pollutants such as ozone and fine particulate matter (PM<sub>2.5</sub>). Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and sulfur oxides (SO<sub>x</sub>) impacts are generally localized to the area in which they are emitted. Coarse particulate matter (PM<sub>10</sub>) can create a local air quality problem in the vicinity of the emission source, but also can be a regional issue.

Regional impacts are evaluated by comparing maximum daily and annual emissions from the Project with emissions of ozone and particulate matter (PM) precursors in Riverside County. Localized impacts are evaluated by looking at other local sources of pollutants that are not included in the background air quality data to determine whether these sources in combination with Rio Mesa SEGF would be expected to cause significant cumulative air quality impacts.

Cumulative impacts at the regional scale are evaluated by assessing the Project's contribution to regional criteria air pollutant emissions. While the relative importance of volatile organic compounds (VOC) and NO<sub>x</sub> emissions in ozone formation differs from region to region and from day to day, California law requires reductions in emissions of both precursors to reduce overall ozone levels. The change in the sum of emissions of these pollutants, equally weighted, is used to estimate the incremental contribution of the Project to regional ozone levels. The Mojave Desert Air Quality Management District (MDAQMD) and California Air Resources Board (CARB) have determined that ozone concentrations in the area largely reflect the impact of transport from the South Coast Air Basin (CARB 2009). Therefore, in this instance a comparison of Project emissions with regional emissions in the Mojave Desert Air Basin (MDAB) is not particularly informative because regional air quality is not correlated with local or regional sources of emissions. However, this also suggests that Project emissions will have minimal impact on local ozone levels because the majority of ozone concentrations reflect transport from outside the MDAB.

A comparison of the emissions of PM<sub>10</sub> and PM<sub>2.5</sub> precursor emissions from the Project with regional PM<sub>10</sub> and PM<sub>2.5</sub> precursor emissions can be used to provide an estimate of the impact of the Project on regional PM<sub>10</sub> and PM<sub>2.5</sub> levels. Regional emissions of NO<sub>x</sub> and VOC, which are precursors of PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone, are relatively low. The majority of regional PM<sub>10</sub> and PM<sub>2.5</sub> comes from directly-emitted PM in the form of unpaved road dust and fugitive windblown dust.

Project emissions are compared with projected regional emissions in 2015. Riverside County emissions projections for 2015 were obtained using CARB's web-based emission inventory projection software. Project emissions will result in very small increases (i.e., less than one-tenth of one percent) in total emissions in the County. Because of the relatively small emissions contribution from the Project and because regional air quality is heavily influenced by transport, the incremental contribution of the Project to regional air quality will not be cumulative considerable.

To evaluate potential localized cumulative impacts of the Project in combination with other projects in the area, information was requested from the MDAQMD information regarding projects within a radius of six miles of the Project. Within this search area, two types of projects were used as criteria for identification:

1. Projects for which air pollution permits to construct have been issued since January 1, 2010.
2. Projects for which air pollution permits to construct have not been issued, but that are reasonably foreseeable.

Existing projects in operation since 2010 or earlier are reflected in the ambient air quality data used to represent background concentrations. Consequently, no further analysis of the emissions from this category of facilities is required. The cumulative impacts analysis adds the modeled impacts of selected facilities to the maximum measured background air quality levels, thus ensuring that these existing projects are taken into account.

The MDAQMD responded that the two facilities meeting these criteria are the Blythe Energy Project and Blythe Energy Project Phase II. None of the other projects identified in the project vicinity meet the criteria for potential to contribute to localized cumulative air quality impacts. The Proposed Project's significant impact area is the area surrounding the project site where modeled impacts are above the corresponding EPA significant impact levels (SILs).

Review of the air quality modeling results for these two projects filed with the CEC indicates that the only overlap among the significant impact areas of the Blythe Energy Project, Blythe Energy Project Phase II, and the Project is associated with modeled 1-hr NO<sub>2</sub> impacts. Therefore, only 1-hr NO<sub>2</sub> impacts are examined further. Air quality modeling demonstrates that the NO<sub>2</sub> emissions of the Project, when considered together with the NO<sub>2</sub> emissions of the Blythe Energy Project and Blythe Energy Project Phase II, will not result in an exceedance of state or federal air quality standards for 1-hr NO<sub>2</sub>. Therefore, localized air quality impacts are not cumulatively considerable.

The Rio Mesa SEGF will generate renewable electricity to help SCE and California meet its mandates for renewable electricity, greenhouse gas (GHG) reduction, and global climate change mitigation. It will generate a level of GHG emissions per megawatt hour substantially lower than conventional natural gas- and coal-fired power plants. The Project will help displace the need for electricity generation from fossil

fuels. For example, it will help curtail the need for new generation from fossil fuels and/or displace existing generation from fossil fuels. Therefore, the Project will have a net benefit with respect to global climate change. GHG emissions generated by the Project will not have a cumulatively considerable contribution to global climate change.

#### **5.17.5.2 Biological Resources**

Cumulative effects to biological resources were evaluated within the project vicinity as defined in Section 5.17.4. Potential impacts to biological resources could result due to past, present, and reasonably foreseeable future actions, in combination with the Project, associated with the loss of individuals, loss of habitat, constraints to wildlife movement corridors, habitat degradation, and other “edge” effects.

The BLM, in consultation with the USFWS and California Department of Fish and Game (CDFG), has identified areas of biological concern and has designated Desert Wildlife Management Areas (DWMAs), ACECs, and designated critical habitats (DCHs) to avoid significant cumulative impacts on biological resources in the project vicinity. The project site is located outside of these high-value biological resource areas, and impacts resulting from the Project would not substantially affect the integrity of these high-value areas. The Project will not interfere with the preservation of these high-value areas that are necessary for long-term preservation of natural resources. Additionally, the Project will not substantially prevent movement to and from high-value biological areas. The area that might be impacted by the Project does not support special management resources and, on a regional scale, the proposed Project will not contribute to a cumulatively significant impact based on the preservation of designated high-value biological habitat.

The Project will have less than significant impacts with implementation of mitigation measures to Desert tortoise, Mojave fringe-toed lizard, Gila woodpecker, Harwood’s milk-vetch, Harwood’s eriastrum, Waters of the State of California (WSC), and Waters of the United States (WUS). The potential for these less than significant impacts of the Project to be increased or compounded by similar effects of other past, present, and reasonably foreseeable future projects is evaluated below.

BSPP will result in significant direct and indirect impacts to biological resources, including Desert tortoise, Mojave fringe-toed lizard, Harwood’s milk-vetch, and WSC. GSEP will result in significant direct and indirect impacts to biological resources, including Desert tortoise, Mojave fringe-toed lizard, Harwood’s milk-vetch, Harwood’s eriastrum, and WSC. PSPP will result in significant direct and indirect impacts to biological resources, including Desert tortoise, Mojave fringe-toed lizard, and WSC. GSEP will result in significant direct and indirect impacts to biological resources, including Desert tortoise, Harwood’s milk-vetch, and WSC. DSSF will have impacts to WSC. Each of these projects will reduce these impacts to less than significant levels. None of these projects will result in adverse effects to Gila woodpecker or WUS. The Devers-Palo Verde No. 2 transmission line, including the new CRS, also has the potential to adversely affect biological resources in the project vicinity.

The Project will only affect a relatively small number of desert tortoises, and potential impacts will be avoided or reduced. Moreover, the project site is not located in a DWMA, HMA, ACEC, National Wilderness Preservation Area, or DCH for the desert tortoise. Impacts to Mojave fringe-toad lizard will be marginal since the species and its habitat are predominantly avoided by the Project. Harwood’s eriastrum and Harwood’s milkvetch are predominantly avoided by the Project. Therefore, the incremental

effects of the Project to these special status wildlife and plant species and WSC, when considered together with the less than significant impacts of other reasonably foreseeable projects, will not contribute to cumulatively significant impacts. Existing LORS for impacts to WSC will ensure that the incremental effects of the Project are not cumulatively considerable when considered together with the WSC impacts of the other reasonably foreseeable projects. Impacts to Gila woodpecker and WUS will not be cumulatively significant since no reasonably foreseeable projects will affect these biological resources.

The pending Desert Quartzite project is located immediately north of the Project, but there is a lack of certainty at this time regarding the whether this project will be developed, and if so, when it will be developed. Other details regarding this project, such as the location of project features, also are not available at this time. Nevertheless, to provide a conservative evaluation of potential cumulative effects, the potential for the Desert Quartzite project to increase or compound the effects of the Project on wildlife movement is evaluated below.

Despite the fact that the Desert Quartzite project would be located immediately north of the Project and extend northward near I-10, the combined impact of the two projects to wildlife movement will not be cumulatively significant. The incremental effects of the Project and the Desert Quartzite project may restrict some north-south wildlife movement along the western edge of the project site, primarily for desert tortoise movement since the western edge of the site contains mountainous terrain not navigable for desert tortoise. Cumulative impacts to north-south movement of wildlife south of the project site are not expected to change with the implementation of the Project as only a few hundred acres of similar habitat are present south of the project area before mountainous terrain and the agricultural fields of the Colorado River Valley converge less than five miles south of the community of Palo Verde. Agricultural lands and State Route 78 to the east of the Project also remain major constricting factors to north-south wildlife movement. North-south movement of desert tortoise will not be affected along the eastern edge of the site since this species is not found along the eastern edge of the site.

East-west wildlife movement would still be possible for terrestrial species south of the Project because of the presence of desert habitats in this area and also to the west of the south of the site between the Mule Mountains to the northwest of the project site and the Palo Verde Mountains to the southwest of the project site. Between the northernmost portion of the gen-tie line and I-10, there is an approximately two-mile-wide east-west corridor. This corridor north of the Project will remain available for wildlife use. An analysis of the areas where desert tortoise are found and the potential combined effects of the Project and the Desert Quartzite project, will not significantly impede movement to and from critical resource areas for this species. The Project will not result in cumulatively considerable impacts to wildlife movement.

### **5.17.5.3 Cultural Resources**

The cumulative analysis for impacts to cultural resources was performed for a local and regional geographic area. At the local level, the geographic area considered for cumulative impacts on cultural resources is generally defined as the area on either side of I-10 between Desert Center and Blythe in eastern Riverside County, hereinafter referred to as the I-10 Corridor. The regional geographic area considered for cumulative impacts is the Southern California Desert Region, which includes the 25 million-acre CDCA. Past activities involving ground disturbance and potential impacts to cultural

resources include development of the I-10 corridor, the Devers-Palo Verde Transmission Line, and Kaiser Eagle Mountain Mine. Reasonably foreseeable projects include GSEP, PSPP, BSPP, RSEP, and DSSF.

A cumulative impact to cultural resources refers to a proposed project's incremental effects in combination with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project to cultural resources listed or eligible for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR). Cumulative impacts may result in a substantial adverse change in the significance of a resource, potentially jeopardizing its eligibility for listing on the NRHP and CRHR.

According to the Final EIS and CDCA Plan Amendment for DSSF, past construction of projects with large-scale ground disturbance within the I-10 Corridor, including Chuckwalla Valley and Ironwood State Prisons, I-10, the Devers-Palo Verde Transmission Line, the Blythe-Eagle Mountain Transmission Line and a natural gas line (both of which are parallel to I-10), and Kaiser Eagle Mountain Mine have disturbed at least 7,898 acres and likely destroyed an estimated 2,081 cultural resources. Cultural resources in the Southern California Desert Region have primarily been affected by construction of large-scale military installations and military training operations, although substantial adverse changes to NRHP-eligible resources have been avoided.

According to cultural resources surveys for DSSF, GSEP, PSPP, and BSPP summarized in the Final EIS and CDCA Plan Amendment for DSSF, the I-10 Corridor has an average site density of 0.017 cultural resources per acre. The CEC Decision prepared for BSPP identified potentially adverse effects to 800 sites within the I-10 corridor and approximately 17,000 sites within the Southern California Desert Region as a result of past activities and reasonably foreseeable projects including BSPP, GSEP, and PSPP. DSSF is anticipated to result in significant, unmitigable impacts to 58 archaeological sites. According to the Final EIS for DSSF, cultural resources surveys covering approximately 20 percent of Riverside and San Bernardino counties have identified and documented more than 20,000 cultural resources. The Devers-Palo Verde No. 2 transmission line including the new CRS also has the potential to adversely affect cultural resources.

The Project will avoid impacts to some cultural resources recommended eligible for NRHP and CRHR and it is anticipated that an agreement document along with treatment plans will be prepared and will resolve adverse effects to NRHP eligible resources. In addition, mitigation measures for significant resources under CEQA are provided that will reduce impacts to less-than-significant levels. With approved mitigation measures, Project impacts to cultural resources will be mitigated to less than significant levels. Therefore, the incremental effects of the Rio Mesa SEGF to cultural resources, when considered together with the effects of past, present, and reasonably foreseeable future projects, will not contribute to cumulatively significant impacts. Avoidance of some resources recommended eligible for the NRHP and CRHR, preparation of an agreement document along with treatment plans, and mitigation measures under CEQA will ensure that the Project does not contribute to substantial adverse impacts to cultural resources in the I-10 Corridor and Southern California Desert Region. Project cultural resources impacts are considered less than cumulatively considerable.

**5.17.5.4 Geologic Hazards and Resources**

The geographic scope for analysis of cumulative effects relating to geologic hazards and resources is the project vicinity as defined in Section 5.17.4. Past and present activities in the project vicinity have adversely affected geologic and mineral resources and may be subject to strong seismic ground shaking or geologic hazards. Proposed renewable energy developments and other reasonably foreseeable future projects, including the RSEP, BSPP, PSPP, and GSEP, are likely to involve similar operations and activities, such as grading and operations for foundation support, with potential to increase these effects. The extent and magnitude of effects caused by these and other future projects will depend on the mitigation measures implemented during their construction and operation, among other factors.

Based on the seismic setting, the Rio Mesa SEGF is likely to experience strong seismic shaking within the lifetime of the Project. The Rio Mesa SEGF will be designed in accordance with the seismic design requirements of the 2010 California Building Code (CBC), a design level geotechnical investigation, and applicable LORS. The Project will be designed and constructed to withstand earthquake shaking. Past, present, and reasonably foreseeable future projects also are subject to the seismic design requirements of the 2010 CBC (or applicable building code in their jurisdiction). The potential for the Rio Mesa SEGF to expose people or property to seismic ground shaking will not be compounded or increased by past, present, or reasonably foreseeable future projects. Therefore, the incremental effects of the Rio Mesa SEGF related to seismic ground shaking are not cumulatively considerable.

The potential for the Rio Mesa SEGF to result in geologic hazards (i.e., liquefaction, subsidence and settlement, slope stability, expansive soils, and eolian processes) is generally considered low. However, the active alluvial channels that transect the project area, as well as the areas underlain by eolian sands may be relatively loose at or near the ground surface. Areas where the alluvial washes have incised relatively steep walls in the existing Palo Verde Mesa, as well as the eastern edge of the Palo Verde Mesa where it rises above the Colorado River Basin, have potential for slope instability as a result of natural erosion. The Rio Mesa SEGF will require minor grading and excavation, thereby altering the terrain of the site. The Project will result in changes in drainage, cuts, and fills. The site includes soils potentially corrosive to foundation materials including steel and concrete.

Compliance with applicable LORS and a design level geotechnical report as described in Section 5.17.2 will ensure that the effects of the Rio Mesa SEGF related to geologic hazards, including potentially corrosive soils, are less than significant. While other present and reasonably foreseeable future projects are likely to incrementally increase the potential for geologic hazards, such projects also are subject to existing LORS that address geologic hazards. Geologic hazards will not be compounded or increased by past, present, or reasonably foreseeable future projects. Therefore, the incremental effects of the Rio Mesa SEGF related to geologic hazards are not cumulatively considerable.

The Rio Mesa SEGF will not result in a loss of availability of a known significant mineral resource that would be of value to the region and residents of the state. In addition, there is no potential for impact by a tsunami or seiche. Therefore, no cumulatively considerable impacts associated with loss of significant mineral resources or exposure to a tsunami or seiche will occur.

**5.17.5.5 Hazardous Materials Handling**

Cumulative impacts associated with the handling of hazardous materials were evaluated within the project vicinity as defined in Section 5.17.4. Compliance with existing LORS that address the handling of hazardous materials will ensure that the Rio Mesa SEGF will not create a significant hazard to the public or the environment related to the handling or accidental release of hazardous materials. Past, present, and reasonably foreseeable future projects also are subject to existing LORS that address the handling and accidental release of hazardous materials. Therefore, existing LORS will ensure that the incremental effects of the Project, when considered together with the effects of past, present, and reasonably foreseeable projects, will not create a cumulatively considerable hazard to the public or environment related to the handling or accidental release of hazardous materials.

**5.17.5.6 Land Use**

Cumulative land use impacts were evaluated within the project vicinity as defined in Section 5.17.4. Cumulative land use impacts could occur if the land use impacts associated with development of the Project were increased or compounded by other related past, present, and reasonably foreseeable probable future projects. The Project will be consistent with applicable plans and policies, will not physically divide an established community, and will not conflict with any applicable plan, policy, or regulation adopted for purposes of avoiding or mitigating an environmental effect, including the Chocolate-Mule Mountains Herd Management Area. The Project will not convert any farmland currently used or proposed to be used for agricultural purposes to nonagricultural use or otherwise result in significant impacts to farmland. The Applicant will submit a Change of Zone Application to the Riverside County Planning Department to ensure consistency with applicable land use plans, policies, and regulations. Although the Rio Mesa SEGF will install fencing that will close off a portion of the Chocolate-Mule Mountains Herd Area, the Chocolate Mule Mountains Herd Management Area is located approximately 10 miles to the south of the Project and will not be affected.

A small portion of active farmland will be converted to nonagricultural use as a result of the access road improvements and paving of 34th Avenue. However, the small amount of farmland necessary for road improvements will result in a small effect to agricultural land that is within existing Riverside County ROW for purposes of road improvements, and will not significantly alter agricultural uses in the Study Area.

If past, present, and reasonably foreseeable future projects were to result in direct or indirect impacts to Prime Farmland or Farmland of Statewide Importance, the incremental effects of the Project could contribute to impacts to these farmlands that could be considered cumulatively significant. However, the projects that will likely be under construction before or concurrently with the Rio Mesa SEGF, including the BSPP, PSPP, DSSF, RSEP, GSEP, and the Devers-Palo Verde No. 2 transmission line including the new SCE CRS will not directly or indirectly impact Prime Farmland or Farmland of Statewide Importance. RSEP will have less than significant impacts to established federal rangeland area within the CDCA, but these impacts will not compound or increase the indirect farmland impacts of the Project. Therefore, the incremental indirect effects of the Project on Prime Farmland and Farmland of Statewide Importance will not contribute to cumulatively considerable impacts on farmland.

Moreover, these reasonably foreseeable future projects will not receive discretionary approvals without determinations of consistency with applicable plans and policies, including policies pertaining to development, farmland protection, habitat conservation, and other policies adopted for purposes of avoiding or mitigating an environmental effect. In conclusion, the Rio Mesa SEGF will not create land use impacts that could be increased or compounded by past, present, or reasonably foreseeable future projects causing adverse land use impacts. Therefore, cumulatively considerable land use impacts will not occur.

#### **5.17.5.7 Noise**

Cumulative noise impacts were evaluated within the project vicinity as defined in Section 5.17.4. The Project is not expected to result in significant cumulative effects related to noise during construction or operation. Construction noise will be temporary and will conclude on completion of construction activities. Although operation of the Project will add noise to the ambient sound environment, the magnitude will dissipate with increasing distance from the Project boundary and noise levels will not be significant at any sensitive noise receptor. No projects, including the RSEP, BSPP, PSPP, DSSF, GSEP, and the Devers-Palo Verde No. 2 transmission line including the new CRS are located close enough to the project site to increase or compound the noise effects associated with the Rio Mesa SEGF.

#### **5.17.5.8 Paleontological Resources**

The geographic area for analysis of cumulative impacts to paleontological resources consists of the following geological units in the project vicinity: undisturbed fossiliferous sediments (fine grained sediments sometimes identified as Chemehuevi Formation); late Pleistocene sands, silts, and gravels; and Palo Verde Mesa paleosol. Past and present activities within the region, including highway/roadway construction, commercial and residential development, OHV use, agriculture, electrical energy projects, and pipelines have likely resulted in adverse effects to paleontological resources within these geological units, with the exception of Palo Verde mesa paleosol, the distribution of which across the Palo Verde Mesa and outside the project site is not known.

Potential direct impacts on paleontological resources resulting from construction of the Project primarily involve ground disturbance activities and the construction of supporting facilities, such as temporary construction offices, roads, laydown areas, and parking areas. It is anticipated that operation of the proposed Project and its related facilities will have no impacts on paleontological resources if the access roads between heliostats are paved. If the access roads are on the bare surface of the mesa, there will be significant impacts. A properly designed and implemented mitigation program will reduce the direct paleontological resources impacts of the Project during construction and operations to a less-than-significant level.

Paleontological resources that could be adversely affected by the Project include fossil remains, associated specimen data and corresponding geologic and geographic site data, and the fossil-bearing strata. Construction activities could disturb previously undisturbed fossiliferous sediments (fine grained sediments sometimes identified as Chemehuevi Formation), late Pleistocene silts, sands and gravels, and the Palo Verde Mesa paleosol. Direct impacts to alluvial fans, Holocene alluvium of the mesa, eolian

sediments of the mesa, and alluvium of the current Colorado River floodplain would not result in significant impacts to paleontological resources.

The BSPP and PSPP have a high probability of encountering paleontological resources, but will implement conditions designed to mitigate potential impacts to less than significant levels. DSSF, RSEP, and GSEP have low potential for adverse paleontological resources impacts and will not result in significant impacts. The Devers-Palo Verde No. 2 transmission line project including the new SCE CRS has potential to encounter paleontological resources during construction.

Unknown, unrecorded paleontological resources may be found during construction at nearly any of these project sites, particularly those projects with high probability of encountering resources. As resources are discovered, sites are recorded and information retrieved. If the nature of the resource requires it, the resource is protected. When discovered, paleontological resources encountered during construction of these reasonably foreseeable future projects will be treated in accordance with applicable federal and state laws and regulations, as well as the mitigation measures and permit requirements applicable to a project. Implementation of standard mitigation measures by the Project and other reasonably foreseeable future projects will ensure that cumulative impacts to paleontological resources in the project vicinity are less than significant.

However, it is possible that incremental effects of the Project to the newly-identified Palo Verde Mesa paleosol could be cumulatively considerable if other past, present, and reasonably foreseeable future projects result in impacts to this sensitive paleontological resource. However, it is not known how widely the newly-identified paleosol is distributed on the Palo Verde Mesa and outside the project site, and it is not known if the paleosol is less, equally, or more fossiliferous outside of the area surveyed for paleontological resources as part of the Rio Mesa SEGF. This newly-identified paleosol is not known to be present on the sites for the RSEP, BSPP, PSPP, DSSF, GSEP, or the Devers-Palo Verde No. 2 transmission line project including the new SCE CRS, which are likely to be constructed before or concurrently with the Rio Mesa SEGF. Therefore, the incremental effects of the Project are not expected to contribute to cumulatively significant impacts to the Palo Verde Mesa paleosol.

#### **5.17.5.9 Public Health and Safety**

The geographic scope of analysis for cumulative effects to public health is a six-mile radius from the project site. This is the same six-mile radius for localized significant cumulative air quality impacts described and evaluated in Section 5.17.5.1. Public health and safety impacts of the Project are primarily related to air quality. A letter submitted to the MDAQMD requested the following information regarding other projects that qualify for review under the cumulative air quality impact analysis:

- Projects located within a six-mile radius of the project site; and
- Projects issued a new Authority to Construct permit after January 1, 2010.

MDAQMD has responded that there are only two projects meeting these criteria: Blythe Energy Project and Blythe Energy Project Phase II.

A procedure for performing the cumulative criteria pollutant impacts analysis is discussed in Section 5.17.5.1 and Appendix 5.1G. This cumulative criteria pollutant impact analysis determined that the Rio

Mesa SEGF, in combination with other nearby, foreseeable projects, will not cause a combined air quality impact that exceeds significance thresholds. Therefore, cumulatively considerable impacts to public health and safety will not result.

In contrast with the approach used to estimate impacts for criteria pollutants, significance thresholds developed for TACs are set sufficiently stringent so as to preclude the potential for any significant cumulative impacts. Thus, a separate cumulative impacts analysis for TACs is not required and cumulatively significant public health and safety impacts related to TAC emissions will not occur.

#### **5.17.5.10 Socioeconomics**

Temporary cumulative socioeconomic impacts could occur when overlapping construction schedules of multiple projects create a demand for workers that cannot be met by the local labor force, thereby inducing in-migration of non-local labor and their households. Operational cumulative socioeconomic impacts could occur when multiple projects cause a substantial increase population in an area that leads to demand for housing, schools, public services, or utilities that exceeds available capacity. Environmental justice impacts also are discussed in this section.

The geographic scope of analysis for cumulative socioeconomic effects will include the counties and communities within an approximate two-hour commute from the project site, including eastern Riverside County and portions of Imperial County, California and La Paz, Maricopa, and Yuma Counties in Arizona. Communities include Coachella, Palm Springs, Palm Desert, Cathedral City, and Indio in Riverside County, California; El Centro and Calexico in Imperial County, California; the City of Yuma in Yuma County, Arizona; and Lake Havasu City in Mohave County, Arizona. This geographic scope is appropriate because socioeconomic effects of the Project including job creation, tax revenue generation, expenditures, and impacts to housing supply, schools, public services, and utilities have potential to occur throughout this area. However, socioeconomic effects will primarily occur within Riverside County.

The Project will have substantial beneficial socioeconomic impacts during construction and operations in terms of job creation, expenditures, and tax revenues. In fact, the positive incremental impacts of the Project, including job creation, expenditures, and tax revenues, will combine with the similar positive socioeconomic impacts from other present and reasonably foreseeable future projects in the project vicinity, including BSPP, RSEP, PSPP, DSSF, and GSEP, to create even greater positive cumulative impacts to the local economy.

Construction of the BSPP, RSEP, PSPP, DSSF, and GSEP may overlap with construction of the Project. Construction of the Devers-Palo Verde No. 2 transmission line including the new SCE CRS is expected to be complete and in service by third quarter 2013, prior to commencement of Project construction in fourth quarter 2013.

The CEC Decision for BSPP analyzed average and peak construction labor needs by construction craft for the BSPP, PSPP, GSEP, RSEP, and DSSF and compared them to the available labor force for these projects. This analysis determined that these projects will have total peak month labor needs of 4,189 workers and total peak month local housing need of 562 housing units. The Project will have peak month labor needs of 2,500 workers during month 21. Assuming 15 percent of workers seek temporary local housing during construction consistent with the assumption for other reasonably foreseeable future

projects, the Project will have a local housing need of approximately 628 housing units during peak construction in month 21.

Under the conservative assumption that peak construction periods overlap for all reasonably foreseeable projects including the Project, there would be demand for 1,190 temporary housing units in the cumulative area. There are approximately 22,000 total motel or hotel rooms within a two-hour commute from the project site. In addition, the communities closest to the project site had very high vacancy rates in 2010, ranging from 17.5 to 60.2 percent with a combined total of 2,936 vacant units. The communities throughout the entire Study Area had vacancy rates ranging from 5 to 60.2 percent, with a total of 72,831 vacant units. RV parks and campsites also are available as temporary housing. Available housing supply in the study area far exceeds conservative estimates of cumulative. There is ample supply of housing units to accommodate workers drawn from outside the two-hour commute area, such as boom crane operators, boilermakers, electricians, pipefitters, welders, and other specialized crafts for which workers are in short supply. In addition, the RSEP includes plans for on-site accommodations for construction workers. Therefore, the incremental effects of the Project, when considered together with other past, present, and reasonably foreseeable future projects, will not result in cumulatively significant, adverse impacts to housing supply during construction. Moreover, the temporary placement of construction workers within existing housing units, motel and hotel rooms, RV parks, and campsites will not result in adverse impacts to schools, public services, or utilities since these facilities have already been accounted for in existing plans for public services and utilities.

Operational labor needs of the reasonably foreseeable future projects and the Project are substantially smaller than construction labor needs and will not contribute to a cumulatively significant increase in demand for housing that exceeds available supply. In addition, cumulative increases in demand for schools caused by permanent relocation of full-time employees within the cumulative area will be addressed by the payment of development impact fees as well as through the payment of property taxes by the projects. The Palo Verde Unified School District is currently below enrollment capacity, enrollment capacity has been declining, and these trends are expected to continue. Therefore, increased demand within this district would have some beneficial effects.

Cumulative operational impacts to public services including police, fire, hazardous materials handling, and medical resources and facilities will not be cumulatively considerable due to compliance with existing LORS, including preparation of worker safety and fire prevention programs. All reasonably foreseeable future projects and the Project will comply with LORS addressing operational impacts to public services. For additional details on these LORS refer to Sections 5.1 Air Quality, 5.5 Hazardous Materials, 5.9 Public Health, 5.12 Traffic and Transportation, 5.14 Waste Management, 5.15 Water Resources, and 5.16 Worker Safety.

In addition, cumulative operational impacts to utilities will not be cumulatively considerable. The Project will utilize on-site groundwater and treatment wastewater on-site. There is no potential for the Project to contribute to cumulative impacts to water or wastewater systems. Cumulative impacts to groundwater are discussed below under 5.17.5.15. Cumulative demand for natural gas from reasonably foreseeable future projects and the Project will not exceed existing capacity and require the construction of new facilities or infrastructure to meet demand. Cumulative impacts to electrical infrastructure will not occur.

The Project will not result in significant adverse environmental or public health impacts that could impact any human populations. As a result, there is no potential for the Project to result in disproportionate adverse impacts to communities of concern in the area, including minority or low-income populations. Due to their nature as solar energy projects and their location in relation to the Project and communities of concern, reasonably foreseeable future projects will not compound or increase Project effects in a manner that would result in significant adverse environmental or public health impacts. Therefore, the incremental effects of the Project will not contribute to cumulatively considerable, disproportionate adverse impacts to communities of concern, including low-income and minority populations. No cumulatively significant environmental justice impacts will occur.

#### **5.17.5.11 Soils**

The geographic scope for analysis of cumulative effects related to soils is the project vicinity as defined in Section 5.17.4. Past and present activities within the project vicinity have resulted in adverse effects to soils, including erosion and disturbance. These activities include clearing, grading, compaction, and related soil disturbance associated with urban development, development of infrastructure (e.g., roads, highways, transmission lines), and off-highway vehicle (OHV) use. In addition, construction activities associated with proposed renewable energy developments and other reasonably foreseeable future projects in the vicinity are likely to involve similar activities with potential to cause soil disturbance. The extent and magnitude of effects caused by these future projects will depend on mitigation measures implemented during their construction and operation, among other factors.

The Rio Mesa SEGF will implement significant erosion control measures during construction to prevent accelerated soil erosion and dust generation that could reduce soil productivity and adversely impact water quality. These measures will address both water erosion and wind erosion. The Rio Mesa SEGF will implement temporary BMPs during construction in accordance with the Storm Water Pollution Prevention Plan (SWPPP) required by the California State Water Resources Control Board (SWRCB) for all construction projects over one acre in size and the Drainage, Erosion, and Sediment Control Plan (DESCP) required by the CEC. In addition, the Rio Mesa SEGF will incorporate strategies that take advantage of the site's natural attributes to reduce temporary impacts during construction, including restricting the amount of land that is cleared and graded, preserving vegetation where it will not interfere with construction or operation, minimizing soil compaction and decompacting soils where necessary, revegetation, and stormwater control design that promotes sheet flow and greater infiltration rather than channelization and concentration of stormwater.

Compliance with existing LORS and implementation of mitigation measures identified in Section 5.11 will ensure that temporary impacts of the Rio Mesa SEGF to soils, including erosion and disturbance, are less than significant during construction. While other construction activities associated with other present and reasonably foreseeable future projects, including the RSEP, BSPP, PSPP, and GSEP, are likely to incrementally increase the amount of disturbed land and potential for erosion, such projects also are subject to existing LORS that address impacts to soils, including disturbance and erosion.

None of the projects that will likely be under construction before or concurrently with the Rio Mesa SEGF, including the RSEP, BSPP, PSPP, DSSF, and GSEP are located within the same watershed. Moreover, these projects and the Rio Mesa SEGF are subject to existing LORS that address impacts to

soils, including disturbance and erosion. Therefore, the temporary incremental effects of the Rio Mesa SEGF to soils, including disturbance and erosion, during construction, when considered together with the effects of past, present, and reasonably foreseeable projects, are not cumulatively considerable.

Preparation and implementation of an Industrial SWPPP in accordance with the statewide General Industrial Permit will ensure that soil impacts are less than significant during operations. Emissions, principally NO<sub>x</sub> from the auxiliary boilers, will result in less than significant impacts to soil-vegetation systems. As described previously, no other projects have been identified within the same watershed. The potential for the Rio Mesa SEGF to impact soils during operations, including disturbance, erosion, compaction, and adverse effects to soil-vegetation systems, will not be compounded or increased by past, present, or reasonably foreseeable future projects. Therefore, the incremental effects of the Rio Mesa SEGF to soils during operations, including disturbance and erosion, are not cumulatively considerable. Mitigation measures to ensure that soils impacts of the Rio Mesa SEGF are less than cumulatively considerable are described in Section 5.11.

#### ***5.17.5.12 Traffic and Transportation***

The geographic scope of analysis for cumulative traffic and transportation impacts includes the freeway, highway, and roadway facilities that will be utilized by the Project during construction and operations. These facilities include I-10, State Route 78, 34th Avenue, 30th Avenue-Bradshaw Trail, Lovekin Boulevard, 28th Avenue, and Neighbours Boulevard. The project site can be accessed from 34th Avenue and 30th Avenue (Bradshaw Trail). The preferred access to the site will be along 34th Avenue. Truck traffic will only use the preferred access at 34th Avenue. In conjunction with construction and operation of the Project, the segment of 34th Avenue between the project site and State Route 78 will be paved as a two lane undivided roadway and the eastbound approach at the intersection of State Route 78 and 34th Avenue will be improved to include a stop sign. Reasonably foreseeable future projects are not expected to increase vehicle trips on segments of any facilities used by the Project, with the exception of I-10. Reasonably foreseeable future projects will add vehicle trips to I-10 temporarily during their construction periods and during long-term operations.

With the temporary increase in vehicle trips during construction of the Project, I-10 will remain at level of service (LOS) C. However, increased vehicle trips associated with the potential overlap of construction schedules for BSPP, PSPP, GSEP, and DSSF could increase or compound the incremental effects of the Project on east- and west-bound segments of I-10, thus causing LOS to potentially decrease to LOS E or LOS F on a temporary basis during Project construction. However, the incremental effects of construction vehicle trips will not be cumulatively considerable because the Project will stagger worker shifts during construction so that some workers depart the site between 2:00 PM and 4:00 PM, which is outside the evening peak period of 4:00 PM to 6:00 PM. In addition, the other reasonably foreseeable future projects are anticipated to implement measures to reduce their traffic impacts. As a result, the temporary incremental traffic impacts of Project construction will be less than cumulatively considerable. Temporary cumulative traffic impacts will be less than significant. Temporary but adverse cumulative impacts to on- and off-ramps along I-10 are not anticipated to occur because ramps utilized by Project construction vehicle trips are not anticipated to be utilized by construction vehicle trips generated by other reasonably foreseeable future projects.

Operations will require approximately 150 full-time employees. As a result, operational vehicle trips added to freeways, highways, and roadways including I-10 will be minimal. Operations under the Project will not adversely affect LOS for any freeway, highway, roadway, or intersection. Direct traffic impacts during Project operations will be less than significant. Similar to the Project, operational vehicle trips will be minimal for each of the reasonably foreseeable projects, although some trips will occur along east- and west-bound segments of I-10. When considered together with the operational vehicle trips of the reasonably foreseeable projects, the incremental traffic effects of Project operations will not adversely affect LOS for east- or west-bound I-10. As a result, operational incremental traffic impacts of the Project will not be cumulatively considerable. Long-term cumulative traffic impacts will be less than significant. Moreover, adverse cumulative impacts to on- and off-ramps along I-10 are not anticipated to occur during operations because ramps utilized by Project operational vehicle trips are not anticipated to be utilized by operational vehicle trips generated by other reasonably foreseeable future projects.

#### **5.17.5.13 Visual Resources**

This section analyzes the cumulative impacts of the Project in conjunction with past, present, and reasonably foreseeable future projects in the Visual Sphere of Influence (VSOI) for the Project as defined in Section 5.13. The VSOI forms a radial boundary extending 10 miles from the Project and linear features.

The Project will have a marginal effect on visual resources in the Palo Verde Mesa and Palo Verde Valley areas. The Project will be a new, dominant feature of the landscape visible from population centers in the area. The Project will change the existing visual character of the Project, but the moderate to low scenic quality in the project area will not be adversely affected. The approximately 750-foot-tall solar power towers are the most visually noticeable elements. The Project will change the character of the area, but they will not substantially dominate the area in a manner that would substantially degrade existing visual character or the quality of the site and its surroundings.

As of this writing, the only reasonably foreseeable future project within the viewshed of the Project for which sufficient information is known to evaluate visual effects is the Devers-Palo Verde No. 2 transmission line including the new SCE CRS. The Devers-Palo Verde No. 2 transmission line including the new SCE CRS will be parallel to the existing Devers-Palo Verde transmission line, and as a result, will not result in a significant change to the existing visual landscape. Sufficient information regarding the visual appearance of other pending BLM applications within VSOI is not available at this time. Moreover, the future development of such projects is not reasonably foreseeable at this. Therefore, the incremental visual effects of the Project, when considered together with the incremental effects of past, present, and reasonably foreseeable future projects, will be less than cumulative considerable. Cumulatively significant impacts to visual resources will not occur.

#### **5.17.5.14 Waste Management**

Cumulative impacts associated with waste management were evaluated within the project vicinity as defined in Section 5.17.4. Small amounts of construction and demolition waste will be generated during construction of the Project, and incremental amounts of hazardous and non-hazardous waste will be generated during operation. Most of the hazardous and non-hazardous waste generated during

construction and operation will be recycled. The non-hazardous waste that cannot be recycled will be disposed of in Class I and Class III landfills in California, consistent with applicable LORS. The capacity of Class I and Class III landfills is listed in Table 5.14-2. The recycling and disposal capacities of the landfills are adequate to handle the waste generated at the Project.

The Project will generate non-hazardous solid waste that will add to the total waste generated in Riverside County and in California. However, adequate recycling and landfill capacities exist to handle the waste generated by the project, as well as additional projects in Riverside County. The majority of the waste generated during construction and operation will be recycled. The solid waste anticipated to be generated at the Rio Mesa SEGF during construction and operation will be disposed as indicated in Tables 5.14-3 and 5.14-4. Approximately 3,089,583 tons of solid waste was reported to have been placed in landfills in Riverside County in 2010 (CIWMB 2011). Therefore, the Project's impact on solid waste disposal capacity will be less than significant.

The Project also will generate hazardous waste that will add to the total waste generated in Riverside County and in California. Most hazardous waste generated by the Project will be recycled. Hazardous waste treatment and disposal capacity in California is adequate to handle the hazardous waste generated by the Project as well as additional past, present, and reasonably foreseeable projects in Riverside County, including hazardous and nonhazardous waste generated by the RSEP, BSPP, PSPP, DSSF, and GSEP. Therefore, the Project's incremental impact on hazardous waste recycling, treatment, and disposal capacity will be less than cumulatively considerable. Conditions of certification to ensure that the Project's incremental effects are less than cumulatively considerable are provided in Section 5.17.5.14.

#### **5.17.5.15 Water Resources**

Cumulative impacts for water resources were evaluated on a surface watershed and groundwater aquifer basis. The project site, located in Palo Verde Mesa, is underlain by the Palo Verde Mesa Groundwater Basin (PVMGB). Water resources management and use fall under the jurisdiction of Riverside County Department of Public Works, the California Regional Water Quality Control Board (RWQCB), Colorado River Basin Region, the California Department of Toxic Substances Control (DTSC), the United States Army Corps of Engineers, the EPA, the United States Bureau of Reclamation, the BLM, and local water districts and agencies.

Cumulative impacts to water resources could occur as a result of stormwater runoff discharge to surface water resources, the use of groundwater, or impacts to groundwater quality. Operation of the Project has the potential to impact water quality primarily through improper storage and use of materials. Rio Mesa SEGF will adhere to proper material storage and handling as well as any other applicable good housekeeping procedures. Construction and operation of the Rio Mesa SEGF will employ stormwater design BMPs and adhere to a SWPPP, state water quality standards, and other applicable federal, state, and local LORS addressing stormwater runoff and surface water quality. As a result, drainage patterns, drainage volumes and peak flow rates from the site will be similar to existing conditions. Since natural channels/washes will be minimally disturbed and occupied structures will not be placed in areas identified as located within a 100-year floodplain, flooding conditions for the Rio Mesa SEGF will be similar to those under existing conditions. Therefore, construction and operation of the Rio Mesa SEGF will have a less than significant impact to surface water runoff.

None of the solar energy projects that will likely be under construction before or concurrently with the Rio Mesa SEGF, including the RSEP, BSPP, PSPP, and GSEP, are located within the PVMGB. While any other reasonably foreseeable future projects are likely to incrementally increase the potential for stormwater runoff and adverse effects to surface water quality, such projects are also subject to existing LORS that address stormwater runoff management and surface water quality. Therefore, the incremental effects of the Rio Mesa SEGF to surface water runoff, combined with the effects of past, present, and reasonably foreseeable projects, are not cumulatively considerable.

The Rio Mesa SEGF will require use of approximately 400 acre-feet per year (afy) of groundwater for construction and up to 260 afy during operation. Groundwater will be accessed through wells that will be installed on site, and wastewater will be discharged to a treatment process to the extent practicable. Concentrate from the wastewater treatment will be disposed into two evaporation ponds located in the common area. The Rio Mesa SEGF will use less than half of its available annual water allocation from the Metropolitan Water District of Southern California during operations and approximately two-thirds of the allocation during peak construction. Over 25 to 30 years, Project water use would constitute less than 0.2 percent of total water estimated in storage within the PVMGB. At the Project-level, the amount of groundwater use by the Rio Mesa SEGF is considered a less than significant impact.

As stated previously, none of the solar energy projects that will likely be under construction before or concurrently with the Rio Mesa SEGF, including the RSEP, BSPP, PSPP, and GSEP, are located within the PVMGB. While other present and reasonably foreseeable future projects within the PVMGB will incrementally increase the amount of groundwater required for construction and/or operation activities, the cumulative demand for groundwater will not adversely affect the groundwater recharge in the PVMGB. Therefore, the incremental effects of the Rio Mesa SEGF to groundwater use, when combined with the effects of past, present, and reasonably foreseeable future projects, are not cumulatively considerable.

Additionally, the Rio Mesa SEGF will comply with existing LORS addressing groundwater quality and wastewater discharge. As described above, the Rio Mesa SEGF will discharge wastewater to a treatment process. Past, present, and reasonably foreseeable future projects also are subject to applicable LORS addressing groundwater quality and wastewater discharge. Therefore, the Rio Mesa SEGF, when considered together with the effects of past, present, and reasonably foreseeable future projects, will not result in cumulative considerable impacts to groundwater quality. Mitigation measures to ensure water resources impacts will be less than cumulatively considerable are described in Section 5.15.

#### **5.17.5.16 Worker Safety**

Health and Safety Programs for construction, operation, and maintenance activities at the Project will be implemented and will comply with applicable LORS addressing worker safety. Past, present, and reasonably foreseeable future projects, including the RSPP, BSPP, PSPP, DSSF, and GSEP, also are subject to LORS addressing worker safety. Therefore, implementation of Health and Safety Programs and compliance with existing LORS will ensure that the incremental effects of the Project on worker safety, when considered together with the effects of past, present, and reasonably foreseeable projects, will not be cumulatively considerable.

**5.17.6 Mitigation Measures**

This analysis has found no potentially significant cumulative effect therefore no measures have been identified specifically for mitigating such effects. Mitigation measures are provided in Sections 5.1 to 5.16, as applicable. Please refer to those sections for more information.

**5.17.7 Agencies and Agency Contacts**

Agencies with jurisdiction to issue applicable permits and/or enforce LORS are shown in Table 5.17-7.

**Table 5.17-7  
Agency Contacts**

	<b>Agency</b>	<b>Contact</b>	<b>Address</b>	<b>Telephone</b>
1	Council on Environmental Quality	Nancy Sutley, Chair	722 Jackson Place Northwest Washington, D.C. 20503	202-395-5750
2	State of California, Governor's Office of Planning and Research	Ken Alex, Director	P.O. Box 3044 Sacramento, CA 95812-3044	916-322-2318
3	Bureau of Land Management	Cedric Perry	22835 Calle San Juan de Los Lagos Moreno Valley, CA 92553-9046	951-697-5200
4	California Energy Commission	Pierre Martinez	1516 Ninth Street Sacramento, CA 95814	916-651-3765

Sources: <http://www.nepa.gov/ntf/contactus.html>; <http://www.opr.ca.gov/>.

**5.17.8 Permits Required and Permitting Schedule**

No permits for cumulative effects are required for the Project.

**5.17.9 References**

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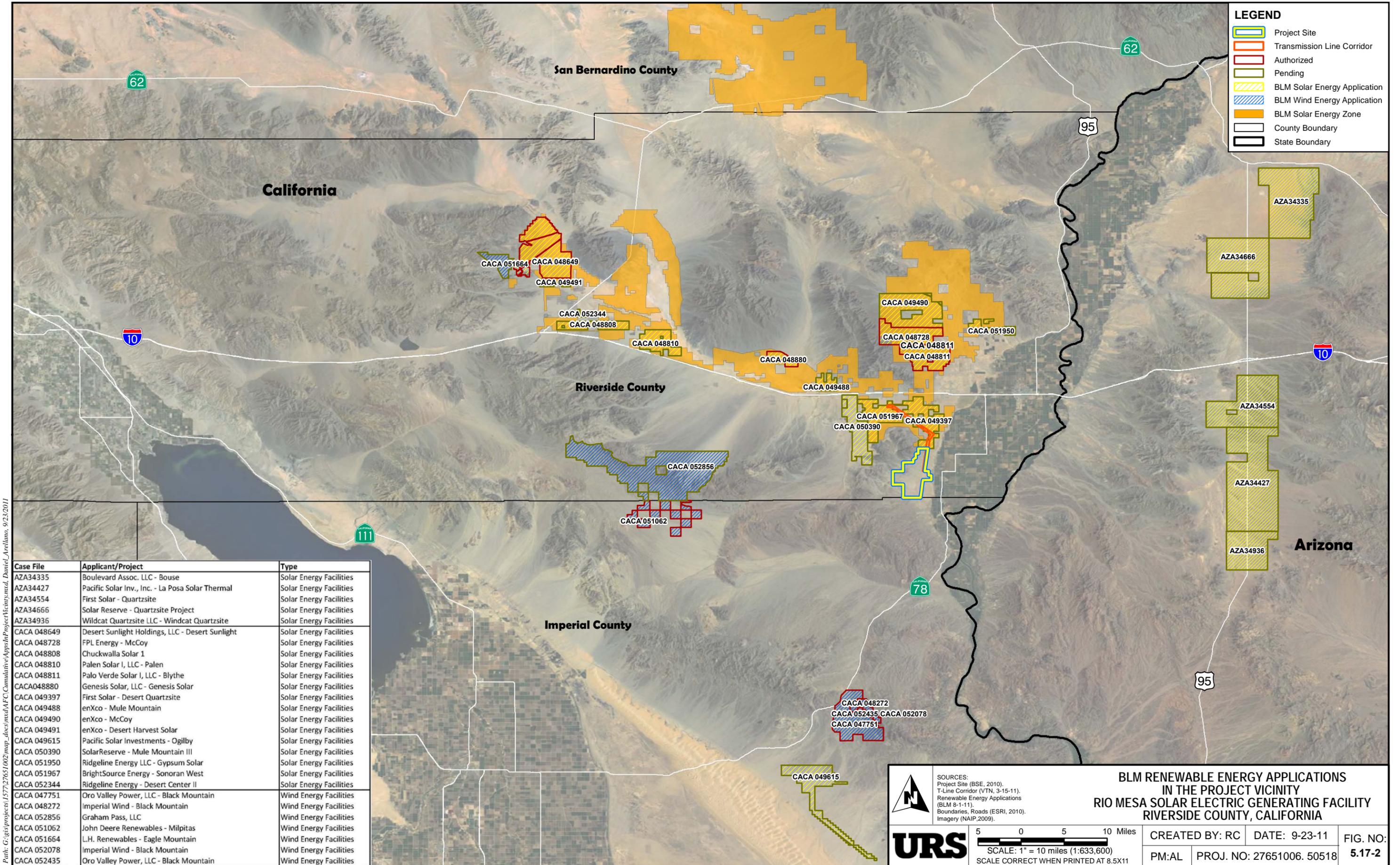
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**LEGEND**

- Project Site
- Transmission Line Corridor
- Authorized
- Pending
- BLM Solar Energy Application
- BLM Wind Energy Application
- BLM Solar Energy Zone
- County Boundary
- State Boundary

Case File	Applicant/Project	Type
AZA34335	Boulevard Assoc. LLC - Bouse	Solar Energy Facilities
AZA34427	Pacific Solar Inv., Inc. - La Posa Solar Thermal	Solar Energy Facilities
AZA34554	First Solar - Quartzsite	Solar Energy Facilities
AZA34666	Solar Reserve - Quartzsite Project	Solar Energy Facilities
AZA34936	Wildcat Quartzsite LLC - Windcat Quartzsite	Solar Energy Facilities
CACA 048649	Desert Sunlight Holdings, LLC - Desert Sunlight	Solar Energy Facilities
CACA 048728	FPL Energy - McCoy	Solar Energy Facilities
CACA 048808	Chuckwalla Solar 1	Solar Energy Facilities
CACA 048810	Palen Solar I, LLC - Palen	Solar Energy Facilities
CACA 048811	Palo Verde Solar I, LLC - Blythe	Solar Energy Facilities
CACA048880	Genesis Solar, LLC - Genesis Solar	Solar Energy Facilities
CACA 049397	First Solar - Desert Quartzsite	Solar Energy Facilities
CACA 049488	enXco - Mule Mountain	Solar Energy Facilities
CACA 049490	enXco - McCoy	Solar Energy Facilities
CACA 049491	enXco - Desert Harvest Solar	Solar Energy Facilities
CACA 049615	Pacific Solar Investments - Ogilby	Solar Energy Facilities
CACA 050390	SolarReserve - Mule Mountain III	Solar Energy Facilities
CACA 051950	Ridgeline Energy LLC - Gypsum Solar	Solar Energy Facilities
CACA 051967	BrightSource Energy - Sonoran West	Solar Energy Facilities
CACA 052344	Ridgeline Energy - Desert Center II	Solar Energy Facilities
CACA 047751	Oro Valley Power, LLC - Black Mountain	Wind Energy Facilities
CACA 048272	Imperial Wind - Black Mountain	Wind Energy Facilities
CACA 052856	Graham Pass, LLC	Wind Energy Facilities
CACA 051062	John Deere Renewables - Milpitas	Wind Energy Facilities
CACA 051664	L.H. Renewables - Eagle Mountain	Wind Energy Facilities
CACA 052078	Imperial Wind - Black Mountain	Wind Energy Facilities
CACA 052435	Oro Valley Power, LLC - Black Mountain	Wind Energy Facilities



**URS**

SOURCES:  
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**BLM RENEWABLE ENERGY APPLICATIONS  
 IN THE PROJECT VICINITY  
 RIO MESA SOLAR ELECTRIC GENERATING FACILITY  
 RIVERSIDE COUNTY, CALIFORNIA**

5 0 5 10 Miles

SCALE: 1" = 10 miles (1:633,600)

SCALE CORRECT WHEN PRINTED AT 8.5X11

CREATED BY: RC

PM:AL

DATE: 9-23-11

PROJ. NO: 27651006. 50518

FIG. NO:  
5.17-2

Path: G:\gis\projects\157727651002\map\_docs\mxd\AFC\CumulativeApp\ProjectVicinity.mxd, Doniel Arellano, 9/23/2011