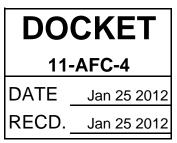
#### Memorandum

Date: January 25, 2012 Telephone: (916) 651-3765 File: 11-AFC-4



To: Commissioner Carla Peterman, Presiding Member Commissioner Karen Douglas, Associate Member Hearing Officer Kourtney Vacarro

From: California Energy Commission - Pierre Martinez 1516 Ninth Street Project Manager Sacramento, CA 95814-5512

# Subject: RIO MESA SOLAR ELECTRIC GENERATING FACILITY (11-AFC-4) ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF). This report serves as a preliminary scoping document that identifies issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will discuss the issues identified in this report at the February 1, 2012 Informational Hearing and Site Visit.

The Rio Mesa SEGF project is being reviewed by the U.S. Bureau of Land Management (BLM) and the Energy Commission under a joint state and federal process. The joint agency review will require additional steps and time in order to integrate the federal review process under the National Environmental Policy Act (NEPA) with the Energy Commission's process. The agencies intend to develop a joint Preliminary Staff Assessment (PSA)/Draft Environmental Impact Statement (DEIS) and subsequently a Final SA/Final EIS that fully addresses the project's impacts under both CEQA and NEPA. A discussion on the joint agency process and scheduling issues is provided in the body of this report.

This Issues Identification Report also provides a proposed schedule for the Committee's consideration, with tentative dates for key proceeding events.

cc: Proof of Service List Docket 11-AFC-4

PROOF OF SERVICE (REVISED 1/23/12) FILED WITH ORIGINAL MAILED FROM SACRAMENTO ON 1/25/12 CJ

# RIO MESA SOLAR ELECTRIC GENERATING FACILITY

# (11-AFC-4)

# **ISSUES IDENTIFICATION REPORT**

**CALIFORNIA ENERGY COMMISSION** 

Siting, Transmission and Environmental Protection Division

## ISSUES IDENTIFICATION REPORT RIO MESA SOLAR ELECTRIC GENERATING FACILITY

## (11-AFC-4)

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### **ISSUES IDENTIFICATION REPORT**

**Energy Commission Staff Report** 

### PURPOSE OF THE REPORT

This report has been prepared by the California Energy Commission staff, in consultation with the U.S. Bureau of Land Management (BLM), to inform the Committee and all interested parties of the potential issues that have been identified in the Rio Mesa Solar Generating Facility (Rio Mesa SEGF) proceeding thus far. These issues have been identified as a result of our discussions with federal, state, and local agencies, and our review of the Rio Mesa SEGF Application for Certification (AFC), filed October 14, 2011, and AFC supplemental material filed on November 18 and December 9, 2011. This Issues Identification Report contains a project description, discussion of the joint Energy Commission and U.S. Bureau of Land Management environmental review process, a summary of potentially significant environmental and engineering issues, and a discussion of the proposed project schedule. Staff will address the status of issues and progress towards their resolution via periodic status reports provided to the Committee.

#### **PROJECT DESCRIPTION**

On October 14, 2011, Rio Mesa I, LLC, Rio Mesa II, LLC, and Rio Mesa III, LLC, and all subsidiaries of Rio Mesa Holdings, LLC, which in turn is a wholly owned subsidiary of BrightSource Energy, Inc., (collectively the applicant) submitted an Application for Certification (AFC) to construct and operate the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF). The Rio Mesa SEGF site is located on the Palo Verde Mesa in Riverside County, California, approximately 13 miles southwest of the City of Blythe.

The proposed Rio Mesa SEGF (Project) would comprise three solar fields and a common area with shared facilities encompassing a total of approximately 5,750 acres. The southern solar field (Rio Mesa I) would be located on privately owned land on approximately 1,800 acres, the middle solar field (Rio Mesa II) would be located on mostly privately owned land on approximately 1,940 acres, with a small portion located on Federal land administered by the Bureau of Land Management (BLM). The third solar field (Rio Mesa III), approximately 1,800 acres in size and located in the northern portion of the project, is mostly on BLM land, with a small portion on private lands. Additional project area will be required for the 220 kilovolt generator transmission tie line that will link the project facilities to the new newly permitted Southern California Edison (SCE) Colorado River Substation, located approximately five miles northwest of the project. A separate Right of Way grant must be approved by BLM for those portions of the project located on BLM land. Each solar plant would generate approximately 250 megawatts (MW), for a total net output of 750 MW and would use heliostats - elevated mirrors guided by a tracking system mounted on a pylon - to focus the sun's rays on a steam generator receiver located atop a 750-foot tall solar power tower near the center of each solar field. Each solar plant would utilize approximately 85,000 heliostats.

The shared facilities located in the common area located east of the plant sites would include administration, control, maintenance, and warehouse buildings; a heliostat assembly building, evaporation ponds, groundwater wells, a water treatment plant, construction laydown and parking areas, mobile equipment maintenance facilities and a natural gas tap and meter station (see Figure 1).

If the proposed Project is approved by the Energy Commission, the Applicant plans to begin construction on the first plant in the fourth quarter of 2013 with commercial operation anticipated in the fourth quarter of 2015. The second and third plants are planned to be constructed in 2014 and 2015 with commercial operation of third plant planned for second quarter of 2016. The commercial operation milestones noted above for the first and second plants are based on approved Power Purchase Agreements (PPAs) with SCE and under review for approval by the California Public Utilities Commission (CPUC). The third plant commercial operation milestone is based on a PPA with Pacific Gas & Electric and has been approved by the CPUC, but the specific PPA contract has not been officially assigned to the third plant. It is BrightSource, Inc.'s intention to assign an approved PPA to the third plant in the first quarter of 2012.

### ENERGY COMMISSION AND BUREAU OF LAND MANAGEMENT JOINT REVIEW PROCESS

In 2007 the BLM and the Energy Commission executed a Memorandum of Understanding (MOU) concerning Joint Environmental Review for Solar Thermal Power Plant Projects. The purpose of the MOU was, in part, to lay out the direction to conduct joint environmental reviews of solar thermal projects in a single CEQA/NEPA document/process. It is in the interest of the BLM and the Energy Commission to share in the preparation of a joint analysis of the proposed project to avoid duplication of staff efforts, to share staff expertise and information, to promote intergovernmental coordination, and to facilitate public review by providing a joint document and a more efficient environmental review process.

Under federal law, the BLM is responsible for processing requests for rights-of-way to authorize the proposed project and associated transmission lines and other facilities to be constructed and operated on land it manages. In this case approximately one-third of the project is on BLM land, as well as the majority of the generator transmission lines. In processing applications, the BLM must comply with NEPA, which requires that federal agencies reviewing projects under their jurisdiction consider the environmental impacts associated with the proposed project construction and operation. Although the majority of the project is proposed on private lands, the BLM must analyze the entire project and include those non-BLM managed lands as an associated component of the project.

As the lead agency under CEQA, the Energy Commission is responsible for reviewing and ultimately approving or denying all applications to construct and operate thermal electric power plants, 50 MW and greater. The Energy Commission's facility certification process carefully examines public health and safety, environmental impacts and engineering aspects of proposed power plants and all related facilities such as electrical transmission lines, natural gas lines, and water pipelines. Additional discussion regarding the joint review process is provided later in this report under the "Project Schedule" heading.

### POTENTIAL MAJOR ISSUES

The following discussion summarizes major issues Energy Commission staff has identified to date, identifies the parties needed to resolve each issue, and outlines a process for achieving resolution.

The Committee should be aware that this report may not include all of the significant issues that may arise during this proceeding. The discovery phase of the proceeding has just commenced, and other parties and members of the public have not yet had an opportunity to identify their concerns or raise issues for staff to investigate and resolve. Additionally, as will be discussed later in this report, staff is working closely with other governmental agencies, including, but not limited to, Riverside County, U.S. Fish and Wildlife Service, California Department of Fish and Game, the U. S. Bureau of Land Management and others, to identify issues as this proceeding moves forward. The identification of the potential issues contained in this report is based on comments of other government agencies received to date and on staff's independent analysis and judgment regarding whether any of the following circumstances could occur:

- Potential significant impacts which may be difficult to mitigate;
- Potential areas of non-compliance with applicable laws, ordinances, regulations or standards (LORS);
- Areas of conflict between the parties; or
- Areas where resolution may be difficult or may affect the schedule.

This report does not limit the scope of staff's analysis throughout this proceeding, but it helps guide the initial areas of analyses regarding potentially significant issues that the Rio Mesa SEGF proposal poses.

The table on the following page lists all the subject areas evaluated and notes those areas where major issues have been identified. Although many areas are identified as having no major potential issues, because the discovery phase is just beginning, it is possible that other significant issues may arise in the future. Additionally, disagreements regarding the appropriate amount of information to be provided or conditions of certification may arise between staff and the applicant that will require discussion at workshops and potentially during subsequent hearings.

Major Issue	Subject Area	Major Issue	Subject Area	
Yes	Air Quality	No	Public Health	
Yes	Alternatives	No	Reliability	
Yes	Biological Resources	No	Socioeconomics	
Yes	Cultural Resources	Yes	Traffic and Transportation	
No	Efficiency	No	Trans. Line Safety & Nuisance	
No	Facility Design	Yes	Transmission System Engineering	
No	Hazardous Materials	Yes	Soil and Water Resources	
Yes	Land Use	Yes	Visual Resources	
No	Noise and Vibration	No	Waste Management	
Yes	Geology and Paleontological Resources	Yes	Worker Safety and Fire Protection	

### AIR QUALITY

The Applicant states that because of its low emission levels, Rio Mesa SEGF does not require a Prevention of Significant Deterioration (PSD) permit. A PSD permit is a federal permit issued by the U.S. Environmental Protection Agency (U.S. EPA) for review and permitting of new or modified major stationary sources of air pollution to prevent significant deterioration of ambient air quality. A major source is a listed facility (one of 28 PSD source categories listed in the federal Clean Air Act) that emits at least 100 tons per year (TPY), or any other facility that emits at least 250 TPY. Effective July 1, 2011, a stationary source that emits more than 100,000 TPY of greenhouse gases (GHGs) is also considered to be a major stationary source. The authority for review and implementation of the PSD permit currently lies with the U.S. EPA, but may be delegated to the Mojave Desert Air Quality Management District by the time the permit is issued.

The applicant expects facility GHG emissions to be 99,122 TPY, just under the PSD trigger threshold of 100,000 TPY. The applicant calculates the total facility GHG emissions based on operations of stationary sources including boilers, emergency generators, fire pumps, etc. However, the applicant does not include GHG emissions from mirror washing activities in total facility GHG emissions, although they estimate washing activities as a large fraction of boiler emissions, which are 38,509 TPY.

U.S. EPA indicates that the vehicle portion of the washing operations may not be required for this threshold determination because mobile sources are exempt from GHG calculations, but the portion of GHG emissions from powering the water pumps for washing purposes definitely needs to be included. U.S. EPA also reviews projects within about 5 % of PSD trigger thresholds.

Staff needs more detailed information about the GHG emissions of the mirror washing activities and will issue data requests asking the applicant to break down total GHG

mirror washing emissions into one component for transporting the washing apparatus and a separate component to power the mirror washing pumps. Staff expects that even adding a small portion of the GHG emissions from the mirror washing activities would make the total facility GHG emissions exceed the 100,000 TPY threshold. The Applicant may choose to reduce the hours of operations of the auxiliary boilers to keep total GHG emissions below the 100,000 TPY to avoid PSD review.

Staff is working with both the Applicant and U.S. EPA to determine whether the project as proposed and described by the Applicant will trigger federal PSD review. Whether PSD review is delegated to the local air district or is maintained by U.S. EPA, the Energy Commission schedule for processing the licensing of the project is not anticipated to be impacted; however, if the U.S. EPA is required to issue a PSD permit, it may take several years after the Energy Commission decision and must be completed before the project can begin construction.

## ALTERNATIVES

In order for staff to develop a meaningful alternatives analysis, considerable information must be obtained in all technical areas. The environmental document for the Rio Mesa SEGF project will be a joint CEQA/NEPA document requiring coordination with the BLM. Alternatives analyzed under NEPA require rigorous detailed evaluation for comparison to the proposed action whereas under the Energy Commission's CEQA equivalent regulatory program, the alternatives evaluated can be less detailed than the proposed project analysis.

Staff has initiated their review of the Rio Mesa SEGF project and is currently developing data requests with input from BLM. Staff is preparing data requests to better understand the alternatives the applicant considered during their development of their application and may also request additional information related to alternatives not included in the AFC, such as other sites or technologies. To prepare a thorough and detailed alternative analysis that would satisfy NEPA requirements will likely take longer than doing an alternatives analysis that would only need to meet CEQA requirements. However, it is not anticipated that to address alternatives, more time would be required than the time frame noted to address biological and cultural resources.

## **BIOLOGICAL RESOURCES**

In coordination with the U.S. Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG), collectively known as the Renewable Energy Action Team (REAT) agencies, Energy Commission staff has identified several issues that may affect the project schedule, may be incompliant with federal requirements, or may be difficult to mitigate.

#### **REAT Agency Request for Additional Survey Data**

Due to its proximity to the Colorado River and several national wildlife refuges, the proposed project location has potentially high habitat value for breeding and migratory birds as well as bats. The survey data provided to date by the applicant is inadequate to

understand the environmental baseline of avian and bat occurrence in and use of the proposed project area. An adequate environmental baseline is necessary to assess impacts of the proposed project. Therefore, the REAT agencies have jointly requested at least one year's worth of additional avian and bat survey data from the applicant in order to assess the project's impacts to special-status birds and bats. Publication of the joint Preliminary Staff Assessment/Draft Environmental Impact Statement will occur after provision of one year of survey results, which will extend the Energy Commission's 12-month licensing process. To minimize the impact to the schedule, interim results will be requested of the applicant and assessed by the REAT agencies as received.

The REAT agency request for additional surveys and the schedule implications were conveyed to the Commissioners and the applicant at the December 14, 2011 Business Meeting. The survey methodology requested by the REAT agencies was provided in writing to the applicant on December 16, 2011. A public workshop was held on January 6, 2012 to discuss the survey methodology. On January 12, 2012, the Applicant submitted a counterproposal to the REAT agencies survey request. After careful evaluation of the applicant's counterproposal, the REAT agencies remain firm on most of the components of their December 16, 2011 request, particularly regarding migratory bird and golden eagle surveys, which need to start as soon as possible. Staff, in coordination with the other REAT agencies avian and bat survey request as formal data requests. In the meantime, the REAT agencies strongly encourage the Applicant to begin surveys as soon as possible in January to avoid additional impacts to the project schedule and potentially missing the winter or early breeding bird survey period.

#### Non-Conformance with The Migratory Bird Treaty Act

The REAT agencies are concerned that the proposed project would result in take of migratory birds; although additional survey data is necessary to adequately analyze effects, as described above. Incidental take of migratory birds is prohibited by the Migratory Bird Treaty Act and a legal mechanism to exempt or permit such take generally is not available. To achieve compliance with the Migratory Bird Treaty Act, completion of a Bird and Bat Conservation Strategy (formerly Avian and Bat Protection Plan) is necessary prior to construction. The plan should demonstrate how the applicant would avoid and minimize incidental take of resident and migratory avian species to the extent possible. As described above, additional survey data is necessary to support development of this plan and the associated risk analysis to migratory birds. Development of this plan should be done in close coordination with the REAT agencies.

#### Non-Conformance with The Bald and Golden Eagle Protection Act

The REAT agencies are concerned that the proposed project would result in take of bald and golden eagles; although additional survey data is necessary to adequately analyze effects, as described above. Incidental take of bald and golden eagle is prohibited by the Bald and Golden Eagle Protection Act. Implementing regulations allow for the issuance of a take permit if an Eagle Conservation Plan is prepared. The Eagle Conservation Plan should include project design features and conservation measures to

elucidate the risk of project impacts to eagles and eagle territories and ensure no net loss to the affected regional eagle population. Even though the proposed project is a solar generating facility, the compensatory mitigation that ensures no net loss should be consistent with the draft National Eagle Conservation Plan Guidance for Land-based Wind Energy (or the most current USFWS guidance). If take of bald or golden eagles may result from the proposed project, an Eagle Conservation Plan and associated permit must be obtained from the USFWS prior to construction of the project to achieve compliance with the Bald and Golden Eagle Protection Act. The Eagle Conservation Plan should be developed in close coordination with the USFWS and other REAT agencies.

#### Availability of Compensatory Mitigation for Impacts to Desert Washes

The AFC identified direct impacts to 1,264.94 acres of CDFG-jurisdictional washes, including 621 acres of U.S. Army Corps of Engineers-jurisdictional washes (AFC page 5.2-82; Table 5.2-14), and 1,120 acres of microphyll (blue palo verde/ironwood) woodland (AFC page 5.2-66; Table 5.2-11). Staff has not verified these acreages, or considered potential indirect or off-site impacts to additional acreage. Recent solar projects approved by the Energy Commission as well as the BLM have required compensatory mitigation up to 3 acres for every one acre of microphyll woodland impacted. This ratio is consistent with BLM's Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan. Impacts to jurisdictional wetlands and other waters may have additional or separate mitigation requirements, including but not limited to on-site enhancement, restoration, or creation, or purchase of credits at an approved mitigation bank. Impacts have not yet been assessed by Energy Commission staff and this report does not preclude requiring higher mitigation ratios, if appropriate. At this time it is unclear whether enough appropriate compensatory habitat acreage or credits is available for acquisition, which has been the standard mitigation approach. If this is determined to be the case, alternate mitigation approaches (e.g., enhancement, restoration, or creation) must be developed and demonstrated to be feasible. Staff will work with the applicant and REAT agencies to identify and ascertain the feasibility of mitigation for impacts to desert washes, including jurisdictional wetlands and other waters as well as microphyll woodland habitat.

The Mojave desert tortoise (*Gopherus agassizii*), a species listed as threatened under the Endangered Species Act of 1973, as amended, occurs on the proposed project site. Because the desert tortoise is a federally listed species, the BLM is required to consult with the USFWS pursuant to section 7(a)(2) of the Endangered Species Act. The applicant may also need to obtain an incidental take permit, pursuant to section 10(a)(I)(B) of the Endangered Species Act for the portions of the proposed project on private lands. Consequently, Energy Commission staff may recommend mitigation measures on the project with regard to the desert tortoise and will coordinate closely with the USFWS and CDFG.

### **CULTURAL RESCOURCES**

Staff is working with the U.S. Bureau of Land Management (BLM) to establish the extent of resources of cultural and historical significance, and to assess potential project impacts upon these resources. Based on the AFC and the associated technical report, it is clear that the historical significance of many of the cultural resources identified in the proposed project area is unknown or inadequately substantiated.

Eligibility determinations are provided in Table 5-1 of the Cultural Resource Technical Report; however, in a number of cases, there is incomplete supporting documentation for these determinations (e.g., DPR 523B forms are not present). The historical significance of all 450+ archaeological sites in the proposed project area of analysis will need to be determined or justified before staff can identify the extent of any potential impacts. Additionally, the BLM has noted that they need clarification or justification for the Area of Potential Effects (APE) that was designated for evaluating indirect effects for this project. The surveyed APE for indirect effects was the standard one mile boundary around the project that is required by the Energy Commission; however, because we are preparing a joint document, the requirements of both the Energy Commission and BLM need to be considered. The BLM would like to see an augmented APE and survey for indirect effects that more fully considers the potential visual, auditory, and atmospheric effects to historic properties. Given the size and complexity of the project area and BLM's expressed concern that the Study Area/APE identified by the applicant is inadequate, it is likely that the expanded and/or additional studies will take longer than the Energy Commission's standard 12-month licensing schedule. Staff would then need additional time to review this supplemental documentation and incorporate it into our assessment.

The applicant has also proposed to reroute the Bradshaw Trail, a BLM designated route and significant historic resource that has been designated as eligible for the National Register of Historic Places. As the BLM and Energy Commission have agreed to prepare a joint CEQA/NEPA document, BLM procedures for considering and mitigating impacts to and rerouting of the Bradshaw Trail may further delay completion of the joint environmental analysis.

Native American consultation is required under federal regulations and consideration of Native American cultural and spiritual connections to the project site is necessary to satisfy CEQA. Arranging meetings with Native Americans and identifying resources, impacts, and mitigation can be a time consuming process. Given the extensive number of prehistoric archaeological resources in the proposed project area (approximately 2000+ isolates and 450+ sites identified in the initial surveys), known Native American ancestral and spiritual connections to the project vicinity, and one potential Native American cremation site already identified within the project APE, Native American outreach by Energy Commission staff and BLM's consultation under Section 106 of the National Historic Preservation Act of 1966 (Section 106) will likely be a lengthy process that could limit or delay access to resource information, including information from the Native American tribes, and access to the project site for testing and evaluation of the resources. BLM has recently informed cultural staff that Native Americans with ties to

the project area have already indicated that there are numerous cremation sites within both the project site and transmission corridor, which will further complicate the analysis and mitigation process. Avoidance is the normal mitigation method requested by the Native Americans for cremation sites, which could require redesign of the project footprint, reconfiguration of the project site, or consideration of an alternative project site. Additionally, Section 106 consultation cannot be completed until after the PSA/DEIS is published and the Native Americans have had an opportunity to comment on any mitigation measures proposed by the Energy Commission and BLM. The timelines for DEIS review under NEPA is typically 45 days, but will be 90 days if there is a land use plan amendment required for the project. The typical comment period for the PSA under the Energy Commission 's CEQA equivalent process is 30 days. This, and other NEPA requirements, could further delay completion of the FSA/FEIS, adversely affecting the overall licensing schedule and approval process for both the Commission and BLM.

### LAND USE

The proposed project as described in the Application for Certification (AFC) filed on October 14, 2011 required the County of Riverside's approvals on a General Plan Amendment and a change of zone on the project site. The applicant filed the required land use development applications with the County in July 2011, prior to the October filing of the AFC with the California Energy Commission.

On November 8, 2011, the Riverside County Board of Supervisors adopted several policies and ordinances allowing the permitting of solar energy systems and solar power plants within the unincorporated area of Riverside County. The actions that are directly applicable to the Rio Mesa project are briefly described below.

**Board of Supervisors Policy No. B-29** states "that the County will not issue certain permits or approvals unless the Board of Supervisors first approves a franchise, real property interest or development agreement with the owner of a solar power plant. The permits or approvals involve; (i) use of county rights of way, (ii) use of other County property, or (iii) land development under the County's zoning and subdivision ordinances."

Staff received a letter from the County of Riverside, Transportation and Land Management Agency dated January 20, 2012 regarding the proposed project. Under the letter's subheading Solar Power Plant Program, it states the following pertaining to Board of Supervisors Policy No. B-29:

- No encroachment permit shall be issued for a solar power plant unless the Board of Supervisors first grants a franchise to the solar power plant owner.
- No interest in the County's property, or the real property of any district governed by the County, shall be conveyed for a solar power plant unless the Board of Supervisors first approves a real property interest agreement with a the solar power plant owner.

• No approval required by the County's Zoning or Subdivision Ordinance shall be given for a solar power plant unless the Board of Supervisors first approves a development agreement with the solar power plant owner and the development agreement is effective.

**General Plan Amendment No. 1080 and Board of Resolution No. 2011-273**; a county–initiated general plan amendment added county policies to the Land Use Element of the County General Plan. Including the following:

Land Use Policy LU 15.15 permit and encourage in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including, but not limited to, the development of solar power plants in the County of Riverside.

**Ordinance No. 348.4705** amended Ordinance No. 348 authorizing solar power plants on lots ten (10) acres or larger, subject to a conditional use permit within the Natural Assets (N-A) and the Controlled Development (W-2) zone classifications. The proposed project site is within the N-A and W-2 zone classifications.

As part of Energy Commission staff's project review, staff will analyze whether the project complies with these ordinances.

### PALEONTOLOGICAL RESOURCES

Initial investigations of the site and linears have discovered a previously unrecognized fossiliferous strata containing an abundance of significant and unique paleontological resources. It is not known how widely this newly discovered deposit is distributed in the site region. If limited in extent, its importance increases.

Without mitigation, site construction would not only adversely impact existing fossils, but also associated specimen data (assemblages), corresponding geologic and geographic site data and the fossil bearing strata itself. Disturbance of these deposits would preclude future scientific investigation of this important resource.

A properly designed and implemented mitigation program would reduce these potential impacts to a less-than-significant level. This mitigation program would include the discovery and preservation of hundreds of vertebrate fossils in an area where none had previously been known to occur. However, due to the likely discovery of hundreds of paleontological resources, this mitigation program would likely impact the construction logistics and schedule in an unpredictable manner. Staff is currently considering whether additional study is appropriate to further delineate the area where significant paleontological resources may be found and what impact they may have on the project development schedule. However, it is not anticipated that to address paleontological resources, more time would be required than the time frame previously noted to address biological and cultural resources.

### TRAFFIC AND TRANSPORTATION

Staff is concerned that glint and glare from the proposed Rio Mesa SEGF could pose safety hazards to users of the nearby traffic and transportation system. The project includes three solar towers, each with a solar field comprised of thousands of mirrors. Reflections from the towers and mirrors could create glint and glare impacts to motorists on Interstate 10 and California State Route 78, pilots operating out of the Blythe Airport (located approximately 7.5 miles northeast of the site) and military pilots flying nearby military training route VR-296 (scheduled by the Air Force at March Joint Air Reserve Base in Riverside). As a result of glint and glare, motorists and pilots could potentially experience retinal burn, flash blindness, veiling reflections, and distracting glare, which could interfere with their abilities to safely operate their vehicles and aircraft, respectively. To explore these potential impacts, staff is requesting that the applicant provide a glint and glare study. Staff will provide details regarding the scope and methodology of the study through data requests.

Staff also must investigate whether the project's 760-foot high solar towers would pose obstruction hazards to aircraft. The Department of Defense (DoD) has provided an initial review of the project and concluded that although the towers are proposed for location underneath military training route VR-296, impacts to the training route could possibly be mitigated. Staff will continue to work with DoD in reviewing the project's impacts to their aviation activities. The height of the solar towers also requires the applicant to submit to the Federal Aviation Administration (FAA) Form 7460-1 "Notice of Proposed Construction or Alteration" for each of the three towers. Once the FAA has reviewed the forms and made a determination regarding whether or not the project poses an obstruction hazard, the applicant needs to submit the FAA's findings to staff for consideration. Depending on the FAA determination, additional review by the Riverside County Airport Land Use Commission may also be required.

#### TRANSMISSION SYSTEM ENGINERING

The California Independent System Operator (CAISO) Phase II Interconnection Study is not available for staff to review at this time. The Phase II Interconnection Study is required for staff to determine the potential need for downstream transmission facilities. The applicant has indicated that as of the writing of this report, the Phase II Interconnection Study is anticipated to be completed in November 2012.

If the study shows the project would cause any transmission line overloads which might require transmission line reconductoring or other significant downstream upgrades, an analysis of potential environmental impacts of these upgrades will be required, which could cause delay in the licensing process for the Rio Mesa SEGF. The reason for the possible delay is that the applicant may be required to submit additional environmental information and staff would be required to evaluate and prepare an analysis where downstream facility upgrades are identified.

### WATER RESOURCES

The applicant has entered into an agreement to lease a minimum of 4,000 acres of land from the Metropolitan Water District (MWD) for the Rio Mesa project development. The lease contains a 600 acre-foot per year (AFY) restriction on the annual volume of groundwater that may be extracted. The project would use up to 400 AFY and 260 AFY of groundwater from onsite wells for construction and operation, respectively. Groundwater at the site is in hydraulic connection with the Colorado River, therefore any project pumping may result in reduced flows to or in the Colorado River. The Bureau of Reclamation is required under legislative mandate to limit withdrawals from the Colorado River to protect environmental resources and the water rights of current users. The Bureau of Reclamation has not, however, adopted any rules on how a new or changed water use would be determined and what mitigation would be required for such uses.

In recent licensing cases staff has considered the Bureau of Reclamation's proposed 'accounting surface rule' as a means of determining whether there would be a use of, or impacts to, the Colorado River. This is a simplified means of determining whether a use of the Colorado River is occurring. In order to better estimate potential impacts to the river in those cases, staff found it necessary to use computer models for detailed analysis of changes in flow to the river that would occur as a result of a proposed project's pumping. Staff anticipates using similar methods for impact analysis on this project. Staff experience with California projects near the Colorado River suggests there can be significant disagreement about the adequacy of the scope of the analysis and whether the potential impacts have been adequately characterized. Staff notes however, that the applicant in this case has used a robust model similar to that used for impact analysis in the recent Blythe Solar Power Project. Staff believes use of the proposed model may be appropriate for this case, but based on past experience will need time to evaluate how the site has been characterized using the model and whether we are in agreement with the applicant's findings that there are no impacts to the Colorado River. This could require significant time for discovery and public workshops to understand their analysis, compare it with ours, and provide for other party or agency input. However, it is not anticipated that to address potential water resource issues, more time would be required than the time frame previously noted to address biological and cultural resources.

Additionally, if the U.S. Bureau of Reclamation determines that the project's groundwater pumping constitutes a diversion or use of Colorado River water, MWD's lease agreement requires the project to purchase an equal amount of non-Colorado River water in exchange. If such a determination is made, staff would likely need additional information and time to analyze any potential impacts resulting from such a water exchange.

The terms of the lease indicate MWD has asserted their jurisdiction as a water supplier for the project. Although the proposed project is outside of MWD's service area, they appear to have authority to serve water to private corporations for use in connection with the generation of electric power. This is provided that, among other things, a major

portion of the power generated is used either directly or indirectly by exchange within MWD's service area

### WORKER SAFETY AND FIRE PROTECTION

The Rio Mesa Solar Electric Generating Facility would be located in a rural area approximately 13 miles southwest of Blythe, California where it is proposed that fire incident first responders would come from Ripley, California. Due to the rural nature of the area and lack of substantial industrial development in the area, there are limited fire protection services available. The Riverside County Fire Department has reviewed the AFC and commented by letter that the "proposed project will have a cumulative adverse impact on the Fire Department's ability to provide an acceptable level of service", but that the project's participation in Riverside County's Development Impact Fee Program is expected "to mitigate a portion of these impacts." Additional fire protection requirements may be requested by the county.

It is yet unknown whether these issues will be resolved by agreement between the applicant and the County of Riverside before publication of the PSA/DEIS. Staff will continue to work with the county to understand their specific requirements. Staff will issue a data request requiring a Fire and Emergency Services Risk Analysis and Needs Analysis which will provide additional information to assist staff in determining any recommendations for impacts mitigation. A timely response to the data request will avoid possible delays to the project's schedule. However, it is not anticipated that to address fire needs issues, more time would be required than the time frame previously noted to address biological and cultural resources.

## **VISUAL RESOURCES**

The visual resources analysis prepared by the Applicant and submitted in the application for certification (AFC) identifies less-than-significant impacts on visual resources from construction and operation of the project. The applicant's brief impact conclusions are presented under Subsection 5.13.4.4 of the AFC, "Impact Significance," on pages 5.13-33 and 5.13-34.

Staff observes that the scope and vertical mass of the project, including three 750-foottall cylindrical concrete solar power towers (SPTs) and 255,000 heliostats, would completely transform the landscape of the site and its surroundings. The landscape character photographs in the visual resources section of the AFC show open agricultural lands and desert habitat in foreground and middleground views with mountainous wilderness areas visible in background views. As stated under Subsection 5.13.3.4 of the AFC, "Landscape Character of the Area," the "existing transmission lines provide one of the few vertical features in an otherwise horizontal trending landscape." Staff is concerned about the potentially significant visual effects of the project on motorists and other viewer groups in the project area and region.

The applicant concludes that the project would not create a new source of substantial light and glare that would adversely affect day or nighttime views in the area (p. 5.13-34)

of the AFC). The impact discussion on light and glare concludes that "the glow created by the solar boilers will add a new element of visual interest in the area." The discussion on glint and glare from the heliostat arrays states that "[g]lint and glare potentially created by the heliostat arrays are considered to have a minimal impact on sensitive viewers...because the reflective or mirror portions of the heliostats are located at a higher elevation than these receptors." However, staff is concerned about the potential for project-related glint and glare to adversely impact motorists along Interstate 10 and State Route 78. Given the proposed height of the SPTs, the bright glow of the solar receiver steam generator at the tops of the towers could adversely impact viewers at relatively distant locations.

Wilderness areas managed by the U.S. Bureau of Land Management (BLM) are located within a few miles of the southern, western, and northwestern borders of the Rio Mesa project boundary: 1) Mule Mountains Area of Critical Environmental Concern covers approximately 4,092 acres near the northwest boundary of the project site. 2) Palo Verde Mountains Wilderness covers approximately 30,500 acres and is located about 2.5 miles from the southwest boundary of the project site. 3) Chuckwalla Desert Wildlife Management Area (DWMA) covers approximately 99,550 acres south and west of the project site. At its closest point, Chuckwalla DWMA is about 3.5 miles from the west boundary of the project site.

The U.S. Fish and Wildlife Service Cibola National Wildlife Refuge covers approximately 16,600 acres southeast of the project site. At its closest point, the refuge is approximately five miles from the southeast boundary of the project site.

The historic Bradshaw Trail currently runs through the proposed site and is designated by BLM as a "back country byway." Back country byways are a subset of the National Scenic Byways Program of the Federal Highway Administration. Under the program, certain roads are recognized based on their cultural, historic, natural, recreational, and scenic qualities. Staff will need to evaluate whether construction and operation of the proposed project over the historic trail is consistent with the intent of the National Scenic Byways Program as it applies to protection of scenic resources along the Bradshaw Trail.

Staff references BLM Instruction Memorandum 2011-061, February 7, 2011, addressing pre-application and screening for solar and wind energy applications. The memorandum defines lands with a "high potential for conflict" to include "[I]ands near or adjacent to lands designated by Congress...or the Secretary for the protection of sensitive viewsheds, resources, and values (e.g., units of the...Fish and Wildlife Refuge System...and the BLM National Landscape Conservation System), which may be adversely affected by development."

Based on Instruction Memorandum 2011-061, staff identifies a potential for conflict from development of the Rio Mesa SEGF near public lands that are managed under BLM's National Landscape Conservation System. The location of the project relative to the Cibola NWR could also be inconsistent with the intent of Instruction Memorandum 2011-

061. In summary, Staff's preliminary review of the project's impact to visual resources indicates that significant and unavoidable impacts are likely to be concluded.

#### **U.S. BUREAU OF LAND MANAGEMENT ISSUES**

Through recent consultation with the BLM, the following items have been brought to Energy Commission staff's attention as potential significant issues. Some of these issues have been briefly discussed earlier in this report; however, they are noted in this section separately to recognize BLM staff's specific comments.

- Joint CEQA/NEPA Document and Process A new joint CEQA/NEPA document template needs to be developed that meets both agencies' needs.
- Historic Bradshaw Trail The applicant proposes to relocate a portion of the Historic Bradshaw Trail. Staff will need time to evaluate this proposed change.
- Donated Lands BLM must determine if donated lands occur within the proposed project area and if so, whether they were donated for a specific purpose, such as for conservation. If there are donated lands within the project, it may be very difficult to allow development of such lands.
- Potential Unavoidable Cultural Resource Impacts The project and transmission generation tie-lines cross know cremation sites of Native American tribes. Significant additional evaluation of potential cultural resources is likely required, including significant coordination with local Native American tribal groups. The BLM will likely require considerable subsurface testing before publication of a joint PSA/DEIS.
- BLM Designated Utility Corridor Impacts Utility corridors are designated for the specific reservation of various types of utilities. The Rio Mesa SEGF project is located within and covers approximately 2/3 of CDCA Utility Corridor "J". Facilities should be designed for current and future transmission needs across public land. A corridor conflict analysis has not been submitted to date to BLM and will be required to evaluate the impacts to the corridor.
- Substation Tie-in Applicant needs to show that there is capacity for the project to tie into the proposed Colorado River Substation.
- Impacts to Biological Resources As noted previously in this report, the REAT member agencies have jointly requested at least one year's worth of additional avian and bat survey data from the Applicant in order to assess the project's impacts to special-status birds and bats. Publication of the joint PSA/DEIS will occur after provision of one year of survey results.
- The proposal is mostly within a Wildlife Habitat Management Area.
- The project footprint overlaps and abuts unsurveyed federal land. Land will need to be surveyed (a potentially timely process) to establish project boundaries.
- The project is encumbered by three transmission line rights-of-way with widths of 25feet, 65-feet, and 80-feet. The project will need to be designed to allow for these existing rights-of-way.

• The footprint on BLM lands is, at best, third in line to 1) First Solar and 2) BrightSource's Palo Verde I application.

### **PROJECT SCHEDULE**

On the following page is staff's proposed schedule for this proceeding. As noted in the discussion on Biological Resources, at least one year of bird and bat surveys are required to better understand and evaluate potential impacts to them. Additionally, Cultural Resources staff and the BLM have indicated that due to the high number of potentially significant cultural resources on the property and the need to better evaluate the significance of those resources, it is likely that the expanded and/or additional studies will take longer than one year to be provided by the applicant and reviewed by staff. Therefore, due to the size and complexities of this project, the number of preliminary issues raised in this report and the need to incorporate a joint environmental review process with BLM, the proposed schedule is very general and assumes the PSA/DEIR will not be published until the second quarter of 2013 at the earliest. Staff anticipates that all other issues raised in this report can be addressed within the timeframes assumed to address biological and cultural resources.

As is always the case, meeting the proposed schedule will depend upon a number of factors, including: the applicant's timely response to staff's data requests; involvement and timely input by other local, state and federal agencies; the submittal of required applications and approval of permits by federal agencies; and, other factors not yet known or expected, like project changes.

STAFF'S PROPOSED SCHEDULE – Rio Mesa SEGF - (11-AFC-4	)
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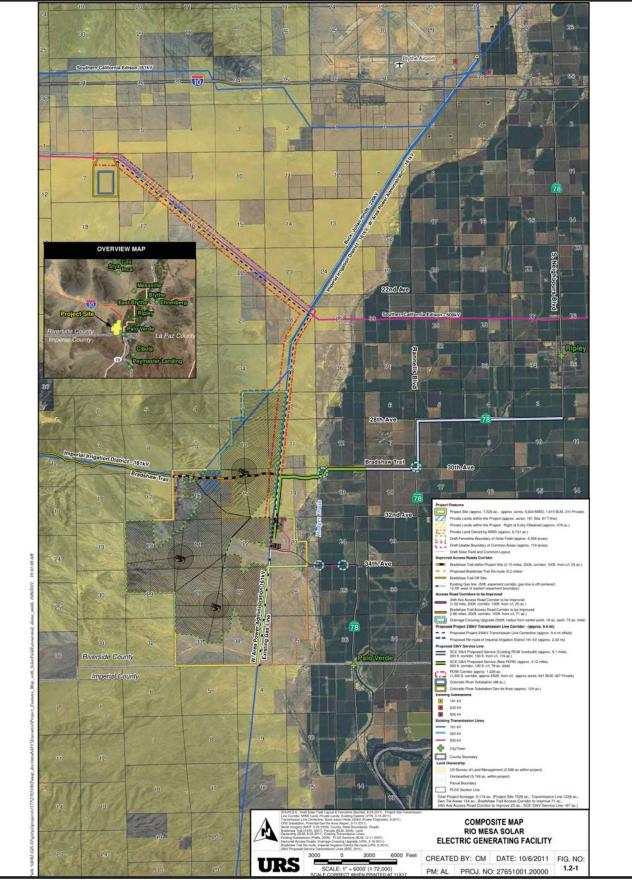
	ACTIVITY	Staff's Proposed Schedule
1	AFC filed	10-14-11
2	AFC Data Adequacy determination at Commission Business Meeting	12-14-11
3	Workshop on Biological Resources – Bird/Bat Survey Protocol	1-6-12
4	Staff files Issues ID Report	1-25-12
5	Perfected POD (BLM)	March 2012
6	NOI (30-day scoping period) (BLM)	April 2012
7	Staff Files First Round of Data Requests	February 3, 2012
8	Staff Files Subsequent Rounds of Data Requests and Applicant Submits Data Responses. Series of Energy Commission Workshops to Discuss/Address Data and Issues	March – December 2012
9	Applicant Conducts and Submits Requested Bird/Bat Survey Information (Information to be submitted throughout the year)	February 2012 – February 2013
10	REAT Agencies Review and Evaluate Survey Information	February 2012 – February 2013
	Energy Commission and BLM Incorporate Information into Environmental	1 <sup>st</sup> and 2 <sup>nd</sup> Quarter of
11	Document (Not Completed Until Biological Assessment Completed) Applicant Conducts and Submits Additional Cultural Resource Evaluations.	2013
12	Energy Commission and BLM Conduct Native American Consultations.	February – December 2012
13	Energy Commission and BLM Conduct Review and Evaluation of New Cultural Information.	1 <sup>st</sup> and 2 <sup>nd</sup> Quarter of 2013
14	PSA/DEIS	Second Quarter 2013
15	PSA/DEIS Workshop	3 <sup>rd</sup> Quarter 2013
16	90-Day Comment Period ends (Based on BLM/NEPA Requirement)	3 <sup>rd</sup> Quarter 2013
17	FSA/FEIS NOA published (approx. 45-days)	4 <sup>th</sup> Quarter 2013
18	30-day protest period (BLM)	4 <sup>th</sup> Quarter 2013
19	FSA Workshop (if necessary)	4 <sup>th</sup> Quarter 2013
20	Prehearing Conference	TBD
21	Evidentiary Hearings	TBD
22	Committee files Presiding Member's Proposed Decision (PMPD)	TBD
23	Hearing on the PMPD	TBD
24	Commission issues final Decision	TBD
25	BLM ROD/ROW grant issued	TBD

POD = Plan of Development NOI = Notice of Intent REAT = Renewable Energy Action Team PSA = Preliminary Staff Assessment FSA = Final Staff Assessment

DEIS = Draft Environmental Impact Statement FEIS = Final Environmental Impact Statement

NOA = Notice of Availability ROD = Record of Decision ROW = Right of Way

#### ISSUES ID REPORT - FIGURE 1 Rio Mesa Solar Electric Generating Facility



CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION SOURCE: AFC Figure 1.2-1



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA 1516 NINTH STREET, SACRAMENTO, CA 95814 1-800-822-6228 – WWW.ENERGY.CA.GOV

#### APPLICATION FOR CERTIFICATION FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY

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#### **DECLARATION OF SERVICE**

I, <u>Cenne Jackson</u> declare that on, <u>January 25, 2012</u>, I served and filed copies of the attached <u>All Parties Letter</u> dated January 23, 2012. This document is accompanied by the most recent Proof of Service List, located on the web page for this project at:

#### [http://www.energy.ca.gov/sitingcases/riomesa/index.html].

These documents have been sent to the other parties in this proceeding (as shown on the attached Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as <u>appropriate</u>, in the following manner:

#### (Check all that Apply)

#### For service to all other parties:

- x Served electronically to all e-mail addresses on the Proof of Service list;
- <u>x</u> Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with firstclass postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "e-mail preferred."

AND

#### For filing with the Docket Unit at the Energy Commission:

- x by sending electronic copies to the e-mail address below (preferred method); OR
- by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT Attn: Docket No. 11-AFC-4 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512 docket@energy.state.ca.us

#### OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission Michael J. Levy, Chief Counsel 1516 Ninth Street MS-14 Sacramento, CA 95814 <u>mlevy@energy.state.ca.us</u>

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

<u>Original signed by:</u> Cenne Jackson Project Assistant, Siting Office