State Of California | The Resources Agency of California

Memorandum

Date: December 28, 2009
Telephone: (916) 651-0966

File: 09-AFC-9

To: Commissioner James D. Boyd, Vice Chair and Presiding Member
Commissioner Julia Levin, Associate Member

From: California Energy Commission -
1516 Ninth Street
Sacramento, CA 95814-5512

Eric K. Solorio
Siting Project Manager

DOCKET
09-AFC-9
DATE DEC 28 2009
REC'D DEC 28 2009

Subject: **RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**
ISSUES IDENTIFICATION REPORT

Attached is the staff's Issues Identification Report for the Ridgecrest Solar Power Project (09-AFC-9). This report serves as a preliminary scoping document that identifies the issues that the California Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the Issues Identification Report at the Informational Hearing and Site Visit to be held on January 5, 2010.

This report also provides a proposed schedule pursuant to the 12-month Application for Certification process.

cc: Docket (09-AFC-9)
Proof of Service List

Attachment

PROOF OF SERVICE (REVISED 12/23/09) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 12/2809
AA

RIDGECREST SOLAR POWER PROJECT

(09-AFC-9)

December 28, 2009

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Siting, Transmission and Environmental Protection Division

ISSUES IDENTIFICATION REPORT
RIDGECREST SOLAR POWER PROJECT
(09-AFC-9)

Table of Contents

ISSUES IDENTIFICATION REPORT

California Energy Commission Staff

This report has been prepared by the California Energy Commission staff to inform the Ridgecrest Solar Power Project Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of staff's discussions with federal, state, and local agencies, and our review of the Solar Millennium, LLC Application for Certification, Docket Number 09-AFC-9. The Issues Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On September 1, 2009, the California Energy Commission received an Application for Certification (AFC) from Solar Millennium LLC for the Ridgecrest Solar Power Project (RSPP). Solar Millennium LLC has also applied to the BLM for a right-of-way on public lands to construct the RSPP. The project is proposed to be developed on a 3,920-acre site, administered by the Bureau of Land Management (BLM). The project site is located in northeastern Kern County, along U.S Highway 395, just west of the China Lake Boulevard exit. The site is approximately four miles southwest of Ridgecrest, California. The community of Ridgecrest is at the southwestern boundary of China Lake Naval Air Weapons Station (NAWS).

The applicant's basic process for solar electric power generation would be to utilize parabolic trough solar collectors to concentrate solar energy onto heat collection elements (HCE) that contain a heat transfer fluid (HTF). After being warmed in the solar troughs, the HTF would be run through a heat exchanger where it would convert water into steam. In the next stage, the steam would be converted into electricity utilizing a Rankine-cycle reheat steam turbine electric generator, which is housed in the power block facility. After the steam is cycled through the turbine, it would be processed through a cooling tower where it would be condensed back to a liquid form (water) and recycled through the system again to drive the steam turbine generator. An air cooled condenser (ACC) will be used for turbine cooling.

The project site arrangement would generally consist of two separate 900-acre, rectangular arrangements of parabolic trough solar collectors surrounding a centrally located power block. The power block facility would house the majority of electrical generation equipment and related systems, with exception of the solar field. The solar collectors would be constructed in long rows across the project site and aligned side by side in a north-south orientation to allow the parabolic troughs to slowly rotate from east to west, tracking the movement of the sun. Adjoining the solar field, immediately to the west, would be various support facilities, including administration and storage buildings.

The project will include constructing a new switchyard and a 230-kilovolt (kV) transmission line to interconnect with Southern California Edison's (SCE) existing 230 kV InyoKern/Kramer Junction transmission line passing west of the project site.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential major issues the Energy Commission staff has identified to date. Discovery is not yet complete, and potentially interested parties have not yet had an opportunity to identify their concerns. 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 judgment of whether any of the following circumstances will occur:

- Potential significant impacts which may be difficult to mitigate;
- Potential areas of noncompliance 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.

The following table lists all the subject areas evaluated and notes those areas where major issues have been identified, as well as areas where staff will be filing data requests (DR). The Committee should be aware that even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area, in the future. In addition, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops and subsequent hearings.

PROJECT ISSUES SUMMARY TABLE

Major Issue	DRs	Subject Area	Major Issue	DRs	Subject Area
No	Yes	Air Quality	No	No	Noise and Vibration
No	Yes	Alternatives	No	No	Paleontological Resources
Yes	Yes	Biological Resources	No	Yes	Public Health
No	Yes	Cultural Resources	No	Yes	Socioeconomics
No	Yes	Efficiency and Reliability	Yes	Yes	Soils & Water Resources
No	No	Electromagnetic Field/Health Effects	Yes	Yes	Traffic and Transportation
No	No	Facility Design	No	No	Transmission Line Safety
No	No	Geological Resources	Yes	Yes	Transmission System Design
No	Yes	Hazardous Materials	Yes	Yes	Visual Resources
Yes	Yes	Land Use	No	Yes	Waste Management
No	No	Project Description	No	No	Worker Safety and Fire Protection

This report does not limit the scope of staff's analysis throughout this proceeding, but acts to aid in the identification and analysis of potentially significant issues that the Ridgecrest project poses. On 12/22/09 staff filed data requests and is also preparing a second set of data requests which will be filed in early January 2010. The following discussion summarizes the major issues that staff has identified to date.

BIOLOGICAL RESOURCES

Background and Major Issues

The Ridgecrest Solar Power Project (RSPP) will impact approximately three square miles (1760 acres) of high quality habitat for numerous desert species including the federal and state threatened desert tortoise and state threatened Mohave ground squirrel.

Significant Biological Resource Impacts for This Project Include:

- Loss of desert tortoise habitat and individuals
- Loss of Mohave ground squirrel habitat and individuals
- Habitat fragmentation and connectivity impacts (wildlife movement corridors) for desert tortoise and Mohave ground squirrel
- Loss of habitat and individuals of other Species of Special Concern such as:
  - Desert kit fox
  - American badger
  - Western burrowing owl
  - Le Conte's thrasher
  - Loggerhead shrike
  - Foraging raptors
  - Migratory birds
- Streambed re-routing
- Cumulative impacts---considering the impacts of the project along with existing and other foreseeable development in the west Mojave Desert on biological resources.

The Project Schedule Will Be Problematic For The Applicant and Permitting Agencies Considering How Much Additional Information Is Needed.

The extent of high quality habitat loss for two listed species and several species of concern for this project will be difficult to mitigate. Three square miles will be completely denuded of vegetation and maintained in that state for the life of the project. Considerable information regarding the extent of the above impacts will need to be provided to better understand the project and its associated impacts to determine feasible and appropriate mitigation (see staff's Biological Resources data requests filed 12/22/09). Providing this critical and complex information so that it can be available for a complete analysis within a shortened analysis schedule will be extremely challenging given that some information may not be available until after the Staff Analysis is released.

This information must be sufficient to complete the federal and state listed species take authorization/permits and the state Streambed Alteration Agreement. In addition, the applicant must identify an acceptable translocation site for desert tortoise and prepare the translocation plan. This is complicated and time-consuming because the applicant must survey the desert tortoise receiving site(s) in the spring while also making certain that the receiving site has sufficient space for the tortoise (i.e. not too many tortoise already on the potential receiving site) making certain that the receiving site does not

contain animals suffering from disease including upper respiratory diseases. The applicant must also select translocation sites and prepare translocation plans for burrowing owls, Mohave ground squirrels, desert kit foxes, and American badgers. The applicant did not provide any of these plans with their application even though these plans are often required for projects in the Mojave Desert and especially for projects of this size with complex biological resource issues.

Finding Suitable Compensation Lands Of Sufficient Size In A Timely Manner Will Be Very Challenging.

Finding compensation lands to fully mitigate for the direct, indirect, and cumulative losses of biological resource values can be a time consuming activity. Buying and protecting private lands are preferable; lands already identified as desirable by land trust organizations such as the Desert Tortoise Preserve Committee (DTPC) are especially valuable. Having an approved land management organization, such as the DTPC, find, purchase, and manage the compensation lands is expedient and allows for inter-agency management desires to be implemented via an agency-approved management and maintenance plan. Staff is not aware of any applicant discussions with biological preserve/land trust organizations to date.

Cost Of Habitat Compensation Mitigation Will Be High.

Determining the acres of compensation land and the costs involved with land purchase, habitat improvements, and the establishment of a suitable endowment for the long-term management of those lands has not been addressed by the applicant. These items need to be negotiated immediately with the U.S. Fish and Wildlife Service, California Department of Fish and Game, BLM, and the Energy Commission to maintain any hope of staying on a schedule which requires a construction start by the end of 2010. Staff has concerns about the applicant having sufficient time to complete these often-complicated negotiations.

Staff suggests that a series of biological resources workshops be held as field work is completed and plans are developed and considered in order to accomplish all of these tasks.

LAND USE

Background and Major Issues

The proposed project requires approval of four individual land use entitlements from the U.S. Bureau of Land Management (BLM): an *Amendment to the California Desert Conservation Area Plan; Authorization of a Lease to Develop Public Land;* an *Amendment to a Right-of-Way Grant;* and a *Termination of a Right-of-Way Grant.* In addition, the project triggers the need for two land use entitlements from the California Public Utilities Commission (CPUC) a *Certificate of Public Convenience and Necessity* and a *Permit to Construct.*

The proposed 1,440 acre project (facility footprint) is to be constructed on federal land within the designated California Desert Conservation Area (CDCA) administered by the BLM. The project requires an amendment to the 1980 CDCA Plan to change the existing Multiple-Use Class L (Limited Use) and Unclassified Lands to Multiple-Use

Class M (Moderate Use) to be consistent with the Plan. Multiple-Use Class M provides for uses such as mining, livestock grazing, recreation, energy and utility development. Energy Commission staff is working with the BLM to process the amendment in a timely manner.

The project proposes the relocation of about 7,500 feet (1.4 miles) of the *230-kV Inyokern/Kramer Junction transmission line* owned and operated by Southern California Edison Company (SCE). The relocation of this transmission line segment requires coordination between the BLM and CPUC. The transmission line relocation requires approval of an Amendment to a Right-of-Way Grant and termination of the existing right-of-way by the BLM. The transmission line relocation also requires the issuance of a Certificate of Public Convenience and Necessity, and a Permit to Construct from the CPUC. If the transmission line is not relocated, the proposed project's solar field 2 would have to be modified or moved. Furthermore, the applicant has not provided any indication that SCE would be willing to move the line.

The discretionary actions by the BLM and CPUC may affect the Energy Commission's licensing schedule for the project.

SOIL & WATER RESOURCES

Background and Major Issues

The project proposes using high quality groundwater from Indian Wells Valley Water District from wells located within the Indian Wells Valley Groundwater Basin for site construction and plant operations that include power cycle makeup water, mirror wash water, domestic potable water, dust suppression water and cooling of ancillary equipment. An ACC will be used for turbine cooling to minimize the need for groundwater consumption. Average water usage is expected to be 0.56 million gallons per day during the 28-month construction period consuming approximately 1,470 acre-feet/yr. Staff is concerned that 1,470 acre-feet is not a realistic amount for meeting construction needs. The Beacon project, with a similar size and location in the same desert region, will be moving less cubic feet of soil than the Ridgecrest project. Expected Beacon project water requirements for the construction phase are 6,000-8,000 acre-ft/yr. Staff is requesting the applicant to take a second look at its projections for construction water consumption.

It is expected that power plant operations will consume approximately 150 acre-feet per year. The groundwater sub-basin from which the project will be drawing water is in a state of overdraft from current producers. Staff's preliminary review of data presented by the applicant suggests that overdraft in the basin will continue and will be exacerbated by the additional water requirements of the Ridgecrest Solar Project. The applicant's position is that they propose to provide offsets to anticipated water use but the offsets have not been identified, quantified or even researched to insure that they are feasible and available.

Additional analysis is needed to evaluate whether this fresh water use will result in significant adverse environmental impacts. Energy Commission staff are working with water districts/agencies and the applicant to evaluate alternative water sources (e.g. brackish and or recycled water).

The project proposes to capture, channelize, and divert El Paso Wash as well as two other unnamed drainages and convey flows around the property boundary. The applicant has reported that flows as high as 9,100 cubic feet per second are anticipated from a 100 year storm event. This proposed realignment would be accomplished by constructing three channels configured with 60 to 90 degree bends. Given the estimated flows, staff anticipates that severe erosion and flooding may occur in these unnaturally configured segments of the realigned drainage. Staff is also concerned that the applicant has not made an adequate attempt at avoiding El Paso Wash. It appears to staff that some reasonable modifications to the proposed site plan could make permanent elimination of over 1.5 miles of this natural desert wash unnecessary. Staff has provided a data request seeking further analysis of the site hydrology. Staff is not sure whether the applicant's consideration of staff's concern and resulting data requests will result in significant changes to the drainage collection and conveyance design. If significant redesign is needed, a response may take additional time beyond the allowed 30 days for the applicant's data response and may impact the project's schedule.

TRAFFIC AND TRANSPORTATION

Background and Major Issues

CEQA Guidelines require the identification and mitigation for roadway hazards. Caltrans research (year 2007) shows that the Brown Road/S. China Lake Blvd./US 395 intersection (post mile 15) has an overall collision rate 2.8 times higher than the State-wide average for a similar type facility. In both phases of the project (construction and operational) additional trips would be generated by assorted vehicle types (passengers, trucks/construction vehicles). According to Caltrans, an optimal US 395 access point is a necessity for the project.

Caltrans recommends three potentially acceptable alternatives to access the proposed project site from US 395. If Brown Road remains the primary access from US 395, then the existing Brown Road/S. China Lake Blvd/US 395 intersection must be improved. These improvements could include realigning the left turn from US 395 onto Brown Road for improved turning radii, constructing acceleration and deceleration lanes and adding a left turn pocket on US 395. This is not the preferred alternative because Caltrans has plans to realign the Brown Road/S. China Lake Blvd./US 395 intersection to create a perpendicular section. This alternative would require acquiring rights-of-way and involve significant roadway construction. Another alternative would be to provide direct access from US 395. BLM recommends that if site access is to occur directly from US 395, it should be designed as to avoid traversing known cultural resource locations. Direct access from US 395 should also be at least 1-mile north of the existing Brown Road/S. China Lake Blvd./US 395 intersection. Such access should be available for both the construction and operational phases of the project. The design of this access would require perpendicular access from US 395, acceleration and deceleration lanes and a left turn pocket.

The acceptable alternative must be coordinated between the applicant, Caltrans and Kern County. Of the three alternatives, the realignment of the intersection would require a significant amount of time to acquire the appropriate rights-of-way and BLM permits. The design and plans for the acceptable alternative must be approved by Caltrans and

Kern County and submitted to the Energy Commission for timely review and incorporation into staff's final assessment. Staff has concerns that the optimal alternative will not be determined in time for the start of project construction in 2010.

TRANSMISSION SYSTEM ENGINEERING

Background and Major Issues

The July 28, 2009 California Independent System Operator (California ISO) Phase I Interconnection study for the Ridgecrest Solar Power Project (RSPP) was completed for a 750 MW net generation plant, and was studied in a California Independent System Operator cluster containing a approximately 11,000 megawatts (MW) of proposed power generation. This study was provided to staff without the necessary Appendices. Since the study was completed about 9,000 MW of the proposed 11,000 MW have withdrawn from the California ISO generator interconnection process. In the updated California ISO queue the size of the proposed Ridgecrest Project has been reduced to 250 MW. The project's Phase 1 study as filed with the AFC is incomplete.
At a minimum, the complete Phase 1 Interconnection Study is required for staff to determine the potential project's impacts on the existing transmission network. If the study shows that the RSPP would cause significant transmission line overloads which might trigger the need for new transmission facilities, transmission line reconductoring or other significant downstream upgrades, a general environmental analysis sufficient to meet the California Environmental Quality Act (CEQA) requirements for indirect project impacts will be required for these downstream upgrades. The CEQA analysis of potential downstream transmission upgrades could cause a delay in the licensing process for the RSPP.

Staff has submitted Data Requests requesting a complete Phase I Interconnection Study.

VISUAL RESOURCES

Background and Major Issues

The proposed project will introduce a substantial facility with industrial character into a landscape presently absent such character. This change in landscape character and scenic quality will impact public views from a variety of vantage points. Presently, the AFC does not present sufficient information to fully assess either the extent of the project's visibility or the visual impact on the variety of public views and viewing perspectives that are available. Staff has provided data requests in an effort to more fully understand the project's visual implications. The requested information along with additional staff analysis and consultations with the Bureau of Land Management will be necessary to address this issue and determine: (1) the extent of the visual change that would occur, (2) project consistency with BLM land management objectives, and (3) whether or not significant visual impacts would result.

PROJECT SCHEDULE

On the following page is staff's proposed 12-month schedule for the key events of the project. Meeting the proposed schedule will depend on: the applicant's timely response

to staff's data requests and involvement and timely input by other local, state and federal agencies. The applicant's timing for submission of related permit applications to other agencies, and the agencies' ability to respond quickly with draft permits and conditions of approval will greatly affect the proposed schedule. This is particularly true of the Section 7 consultation by the Bureau of Land Management with the U.S. Fish and Wildlife Service regarding potential impacts to federally listed sensitive species, such as desert tortoise, and related mitigation options. The applicant must also select translocation sites and prepare translocation plans for species including desert tortoise burrowing owls, Mohave ground squirrels, desert kit foxes, and American badgers.

Staff recommends that the Committee spend time discussing the scheduling issues we have raised at the Informational Hearing on January 5, 2010. These issues are significant and a determination needs to be made in early 2010 whether this project can be permitted in time to meet the American Resource Recovery Act (ARRA) 2010 construction deadline. Staff has finite resources and needs to give the highest priority to the renewable energy projects that can meet the ARRA deadlines.

STAFF'S PROPOSED SCHEDULE – Ridgecrest Solar Power Project - (09-AFC-9)

ACTIVITY	DATE
Commission's determination that AFC is complete	11/4/09
Staff files Data Requests	12/22/09
Staff files Issues Identification Report	12/23/09
Data Request Workshop	TBD
Technical staff receive final comments and conditions from appropriate agencies	1/4/10-1/10/10
Energy Commission Informational Hearing/Site Visit and BLM Public Scoping Meeting	1/5/10
Applicant provides Data Responses	1/22/09
Data Response and Issue Resolution workshop	TBD
Administrative Staff Assessment/Draft EIS (SA/DEIS)	1/25/10
Local, state and federal agency draft determinations AQMD files PDOC	2/12/10
Notice of Availability of SA/DEIS in Federal Register; SA/DEIS filed and 90-day comment period begins; BLM submits Biological Assessment (BA) to USFWS	2/19/10
Staff Assessment (SA) published	3/3/10
Staff Assessment Workshop	3/17/10
BA determined adequate by USFWS	3/19/10
Local, state and federal agency final determinations AQMD files FDOC	4/9/10
Staff Assessment Addendum (SAA) prepared	4/30/10
Prehearing Conference*****	TBD
Evidentiary hearings*****	TBD
Close BLM comment period	5/20/10
Response to comments, prepare Staff Assessment Addendum(SAA)/FEIS	7/1/10
Administrative SAA/FEIS circulated for agency staff review	7/9/10
USFWS issues Biological Opinion	7/15/10
SAA/FEIS distributed; NOA of SA/FEIS in Federal Register	7/30/10
BLM Plan Amendment Protest Period ends; Expedited Governor's review period ends	8/30/10
Presiding Members Proposed Decision (PMPD)*****	TBD
Committee Hearing on PMPD*	TBD
Addendum/Revised PMPD*****	TBD
BLM Record of Decision/Right of Way (ROD/ROW) issued; Energy Commission Decision*****	TBD

* The assigned Committee will determine this part of the schedule.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
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1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
For the *RIDGECREST SOLAR POWER PROJECT*

Docket No. 09-AFC-9

PROOF OF SERVICE
(Revised 12/23/09)

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DECLARATION OF SERVICE

I, April Albright, declare that on, December 28, 2009, I served and filed copies of the attached Ridgecrest Solar Power Project (09-AFC-9) Issues Identification Report, dated December 28, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest]**.

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

For service to all other parties:

__✓__ sent electronically to all email addresses on the Proof of Service list;

__✓__ by personal delivery or by depositing in the United States mail at Sacramento,California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

__✓__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-9
1516 Ninth Street, MS-4
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docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

Original signed by: _____
April Albright