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09-AFC-9
DATE JAN 25 2010
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January 25, 2010

Mr. Eric Solorio
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Responses for Data Requests Set 1, dated December 22, 2009 and Set 2, dated January 19, 2010; Ridgecrest **Solar Power Project, Docket No. 09-AFC-9**

Dear Mr. Solorio:

Attached please find Ridgecrest Solar I, LLC's responses to the CEC's Data Requests Sets 1 and 2, dated December 22, 2009 and January 19, 2010, respectively.

If you have any questions on these responses to the Staff's Data Requests, please feel free to contact me directly.

Sincerely,

Alice L. Harron
Senior Director, Development

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Ridgecrest Solar Power Project

09-AFC-9

Responses to CEC Data Requests

Sets 1 & 2 (#1-262)

Submitted to:
California Energy Commission
January 2010

Prepared by:
AECOM Environment

Submitted by:
Ridgecrest Solar I, LLC

Ridgecrest Solar Power Project
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Introduction to Data Requests

The Application for Certification (AFC) was filed by Solar Millennium, LLC. Since filing of the AFC, in order to facilitate the permitting of the Ridgecrest Solar Power Project (RSPP or Project), a project company was created and therefore the Applicant should now be Ridgecrest Solar I, LLC (RSI), a wholly owned subsidiary of Solar Millennium, LLC. The following data requests have been prepared reflecting this change in applicant structure.

In addition to the minor modification of the applicant name, and in order to avoid another round of data requests, these data responses reflect the new configuration of the proposed Project. Specifically, the description of the reconfiguration is provided below.

To address resource management agencies' comments regarding habitat values, the RSPP site plan has been reconfigured to avoid the impacts to natural stormwater flows across the El Paso Wash. South of Brown Road, this avoidance will be accomplished by shifting the south solar field slightly to the north and west, placing it entirely out of and to the west of the Wash. This adjustment results in an approximate 4% reduction in the area of disturbance of the southern solar field. The reconfiguration also includes relocation of the power block to the north of Brown Road. The main site access road and main office are also moved to north of Brown Road. The reduced footprint of the south solar field requires the number of solar collector array loops, which individually have dimensions of approximately 1,300 feet long by 140 feet wide, to be decreased from 133 to 119. A new site plan is provided as Figure DR-ALT-49-1 and -2 in the Alternatives section of this document.

The design of the 230 kV switchyard has been optimized, resulting in a reduction of the footprint to 3.2 acres (425 ft x 325 ft) from 5.5 acres (600 ft x 400 ft). The new location of the switchyard is such that its western boundary limit will be contiguous with the eastern boundary line of the proposed SCE permanent easement. Modifications to the planned reroute of the existing SCE lines west of the south solar field are consistent with the original intent to closely follow the western limits of the field. The length of the existing lines that will need to be relocated (through a shift to the west) is now 8,600 feet (compared to 8,000 ft in the original site configuration. The length of the proposed realigned segments of the existing SCE 115 kV and 230 kV transmission lines will run 9,060 ft around the southwest corner of the south solar field.

North of Brown Road, the north solar field is shifted north and east to move the field entirely out of the El Paso Wash. The area of disturbance associated with the north solar field has increased by approximately 25% to offset the reduction of the south solar field. The number of solar collector array loops in the north solar field has increased from 145 to 167. In order to contain the entire field between the east side of the El Paso Wash and US Highway 395, the east-west dimensions of the two original segments of the north solar field are reduced and the field is reconfigured into a total of six segments, with some segments of the field shifted east. The reconfiguration of the RSPP results in a slight increase in the ROW to 3,995 acres. Engineered drainages along the perimeters of both the north and south solar fields are being redesigned to accommodate the new solar field configuration. Total disturbed acreage for the project will be increased from approximately 1,760 acres to 1,944 acres (a 10% increase).

Several factors contributed to the increase in disturbance area of the north field. The greatest factor is more unused space within the fence lines of the solar fields due to segmentation of the field to avoid the wash and fit into the remaining available area. The new design is not as efficient as the previous design,

in both use of land area and conversion of solar radiation into electricity. Process efficiency is reduced, requiring approximately 3% more solar loops due to the heat transfer requirements associated with the solar collection and pumping inefficiencies that occur with the staggered field configuration.

To mitigate the overall losses in process efficiency resulting from the new configuration, the process performance of the steam cycle was improved by adding cells to the air-cooled condenser (ACC). This change approximately doubled the area occupied by this piece of equipment, from about 1.66 acres to 3.27 acres; ACC height remains at 120 feet. The increase in ACC size will reduce the steam system backpressure. To accommodate the larger ACC, the layout within the power block was rearranged somewhat, although the overall impact to the power block footprint is negligible.

In addition, regarding the less efficient use of land area, the staggered field configuration results in triangular spaces at the "offsets" in the field design that may be disturbed in the process of grading the site. These areas are currently being evaluated to minimize any impact. The segmentation in the north field has also increased the number of subfields of solar arrays from 4 to 6, resulting in additional terraces, access roads, and on-site drainage channels being required between the subfields. Also, the new SCE lines have been pushed further to the west, which also has resulted in some space inefficiencies and corresponding increase in total disturbance area. The areas of disturbance associated with the relocated SCE transmission lines are included within the total disturbance area cited above. The disturbed areas west of the south field may be able to be further reduced at such time as SCE has finalized their design for the re-alignment.

The movement of the power block to the north of Brown Road will result in a longer gen-tie line alignment and a greater number of monopoles between the power block and the switchyard. The length of the t-line alignment will increase from approximately 1,250 ft to 3,900 ft, and the number of poles will increase from 3 to 4. The reconfiguration will also result in the need for the gen-tie line to cross over Brown Road. The longer north-south dimensions of the north solar field will result in an overall longer run of in-field HTF piping, and the new relative positioning of the two solar fields will result in a longer run of out-of-field HTF piping. The major length of out-of-field piping is a 2,200-foot run from the power block, spanning over El Paso Wash via a new pipe bridge, under Brown Road via a pair of culverts, and onward into the south solar field.

Because the offsite portion of the water pipeline is shortened in the new design, total disturbed acreage for the offsite water line will be reduced from approximately 18 acres to approximately 16.3 acres. The diameter for the water pipeline has increased from 12" to 16" to accommodate a request from the Indian Wells Valley Water District.

RSI and its team have made every attempt to provide thorough answers to the data requests. However, due to the large quantity and complexity of some of the requests and the revisions to the Project to be responsive to the biological issues raised by the CEC and BLM, a small number of data requests do not have complete answers. For these data requests, we have included in some cases a partial answer and in all cases a date by which a complete answer will be provided. However, given the extensive information contained in the AFC and in these data responses, the CEC and BLM should be able to complete their Draft Staff Assessment/Draft Environmental Impact Statement without problem or delay.