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July 13, 2009

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08-AFC-13

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Re: CALICO - SES SOLAR ONE PROJECT (08-AFC-13)
CURE Data Requests, Set Two (Nos. 229-275)

Dear Ms. Bellows and Ms. Champion:

California Unions for Reliable Energy (CURE) submits this second set of data requests on Transmission/Interconnection issues to Tessera Solar for the Calico - SES Solar One Project, pursuant to Title 20, section 1716(b), of the California Code of Regulations. The requested information is necessary to: (1) more fully understand the project; (2) assess whether the project will be constructed and operated in compliance with all laws, ordinances, regulations and standards; (3) assess whether the project will result in significant environmental impacts; and (4) assess potential mitigation measures.

CURE reserves the right to submit additional data requests on any topic that requires further information.

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Pursuant to section 1716(f) of the Energy Commission's regulations, written responses to these requests are due within 30 days. If you are unable to provide or object to providing the requested information by the due date, you must send a written notice of your objection(s) and/or inability to respond, together with a statement of reasons, to Commissioners James Boyd and Jeffrey Byron and to CURE within 20 days.

Please contact us if you have any questions. Thank you for your cooperation with these requests.

Sincerely,

/s/

Loulena A. Miles

LAM:bh
Attachment

Background: TRANSMISSION / INTERCONNECTION

I. INTERCONNECTION AGREEMENT

The AFC references the “Interconnection Agreement”¹ but does not provide a copy.

Data Requests

- 229. Please provide a copy of the Interconnection Agreement (“IA”).
- 230. If there is no IA, please explain why the AFC references it.

II. G-1 EVENT

The AFC says the interconnection to SCE will be a single 220 kV line capable of carrying the full 850 Mw output of the Project. That means that SCE and the CAISO could experience a G-1 event of 850 Mw – meaning that all 850 Mw of SES One generation could be simultaneously disconnected from the grid – in the event of a failure of the interconnection line.

Data Requests

- 231. Did the interconnection studies analyze the consequences of an 850 Mw G-1 event?
- 232. Would there be any facility overloads due to an 850 Mw G-1 event occurring during peak load conditions?

III. CAISO SYSTEM IMPACT STUDY

The AFC refers to a final CAISO system impact study² dated November 2008, but the attached Appendix H is an SCE study dated March 7, 2006.

Data Requests

- 233. Please provide a copy of the CAISO system impact study (“SIS”) from November 2008.

¹ AFC p. 3-28.

² AFC p. 3-29.

234. Please provide any correspondence to or from the CAISO from SCE, the Applicant, or any other entity, between March 2006 and November 2008, regarding the SIS (the March 2006 version, the November 2008 version, or any intermediate versions) and any modifications to the SIS.

IV. INTERCONNECTION COSTS

The AFC refers to an SCE facility study which identifies the specific measures and their interconnection costs but does not provide a copy of the facility study.³

Data Requests

235. Please provide a copy of the most recent draft or final facility study done for the Project.
236. Please provide the expected cost of interconnection facilities, including:
- i. Direct interconnection facilities between SES One and the Pisgah substation;
 - ii. Expansion of the Pisgah substation and looping of the existing 500 kV line into Pisgah;
 - iii. Construction of the Pisgah-Lugo #2 500 kV line and associated substation terminations; and
 - iv. Removal of the existing Pisgah-Lugo #1 and #2 230 kV transmission lines and the associated towers.

V. AFC APPENDIX H⁴

Appendix H of the AFC says that 800+ Mvar of dynamic reactive resources will be required to provide system stability,⁵ but there is no discussion of these resources in the AFC.

Data Requests

237. Please explain what reactive resources will be part of the Project.

³ AFC p. 3-29.

⁴ SCE System Impact Study, dated 3/7/06.

⁵ SIS p. 23.

238. Please explain how many Mvar of reactive resources at the 220 kV or 500 kV will be part of the Project.
239. Please explain what dynamic reactive resources will be part of the Project.
240. Please explain any discrepancies between the quantity (in Mvar) and kind (static vs. dynamic) of reactive resources planned to be part of the Project, and the quantity and kind of reactive resources called for in the SIS.
241. Please provide any further studies since March 7, 2006 addressing reactive resource issues raised by construction of the SES One Project.

VI. TRANSMISSION MITIGATION

The SIS says that adding SES One will cause overloads of the Lugo 1-2 transformers and Lugo-Pisgah #1 and #2 230 kV transmission lines under both N-0⁶ and N-1 conditions.⁷ It concludes that eliminating these overloads will require converting the Pisgah substation to a 230/500 kV substation, adding two 230/500 kV transformers at Pisgah, and converting the Pisgah-Lugo #1 and #2 230 kV lines to a single 500 kV line, as well as looping an existing 500 kV line into the expanded Pisgah substation.⁸

Data Requests

242. Please explain whether the Applicant agrees that all the SIS listed measures, including 1) converting the Pisgah substation to a 230/500 kV substation, 2) adding two 230/500 kV transformers at Pisgah, 3) converting the Pisgah-Lugo #1 and #2 230 kV lines to a single 500 kV line, and 4) looping an existing 500 kV line into the expanded Pisgah substation, are needed to mitigate the overload effects of the full SES One Project.
243. If the Applicant does not agree that the SIS listed measures are needed to mitigate effects of the full SES One Project, please provide the Applicant's opinion as to the needed facilities to mitigate overload effects, and any studies underlying the Applicant's opinion.
244. Please explain whether a third 230/500 kV transformer will be needed at Lugo to avoid the overloads of the existing two 230/500 kV transformers due to SES One which are described in the SIS.

⁶ SIS pp. 24-25.

⁷ SIS pp. 25-26.

⁸ SIS p. 27.

245. If the Applicant does not believe that a third 230/500 kV transformer will be needed at Lugo to avoid overloads, please explain why not.
246. Please provide any further studies since March 7, 2006 addressing facility overload issues raised by construction of SES One.

VI. SYSTEM STABILITY

The SIS indicates that there are unresolved system stability projects associated with the SES One Project.⁹

Data Requests

247. Please provide any further studies since March 7, 2006 addressing transient stability issues raised by construction of SES One.
248. Please indicate what measures will be taken to address transient stability issues.

VII. BREAKERS

The SIS indicates that 11-23 breakers will need to be replaced or upgraded due to the SES One Project.¹⁰

Data Requests

249. Please explain whether the Applicant agrees with the SIS that 11-23 breakers will need to be replaced or upgraded due to the SES One Project.
250. Please provide any further studies since March 7, 2006 addressing breaker loading issues raised by construction of SES One.

VIII. MITIGATION COSTS

The SIS provides a preliminary estimate of \$335 million, in 2010 dollars, as the cost to mitigate the electrical system impacts of the SES One Project.

⁹ SIS pp. 28 and 34.

¹⁰ AFC pp. 29, 34.

Data Requests

251. Please explain whether the Applicant agrees with the SIS' estimate of \$335 million, in 2010 dollars, as the cost to mitigate the electrical system impacts of the SES One Project.
252. Please provide any further studies since March 7, 2006 addressing cost of mitigation issues raised by construction of SES One.
253. Please indicate how mitigation costs are to be paid, and by whom (e.g., upfront costs paid by the Applicant, with reimbursement over time from SCE; costs borne directly by SCE; costs shared with other renewable resource developers; etc.).
254. Please provide copies of any documents describing the intended, expected, or the contractually agreed-upon costs and/or allocation of costs for transmission system mitigation associated with SES One.

IX. CONGESTION MANAGEMENT

The SIS says that SES One will increase flows south of Lugo by at least 50 Mw, and will require more congestion management if the proposed Vincent-Mira Loma 500 kV line is not built.¹¹

Data Requests

255. Please provide the permitting and construction status of the proposed Vincent-Mira Loma 500 kV line, including:
 - a. The project proponent
 - b. Required permits
 - c. Status of permitting
 - d. Planned construction start date
 - e. Status of construction
 - f. Planned in-service date
 - g. Source(s) of financing for the line

¹¹ SIS p. 34.

256. Please indicate how congestion management would affect the operation of SES One in the following situations:

- a. If the proposed Vincent-Mira Loma line is in operation.
- b. If the proposed Vincent-Mira Loma line is not in operation.

X. FACILITY STUDY

The SIS says that a facility study is needed.¹²

Data Requests

- 257. Please explain whether a final facility study been completed.
- 258. Please provide the most recent version (whether draft or final) of a facility study which exists.

XI. ENVIRONMENTAL IMPACTS OF PISGAH-LUGO LINE

Appendix EE (Consultant report on environmental impacts of Pisgah-Lugo 500 kV line (dated November 21, 2008) says that the proposed Pisgah-Lugo #2 500 kV line will use 57.1 miles of existing right of way (ROW) and 9.8 miles of new ROW.¹³

Data Requests

- 259. Please explain the basis for the estimate that the proposed Pisgah-Lugo #2 500 kV line will use 57.1 miles of existing right of way (ROW) and 9.8 miles of new ROW. Please provide documentation supporting your answer.
- 260. Please provide any studies or other documents by SCE (or the ISO or any non-SCE entity proposing to build a Pisgah-Lugo line) which discuss the proposed route, and/or the basis for choosing the route.

¹² SIS pp. 35-36.

¹³ AFC pp. 5-6, 34.

XII. PISGAH SUBSTATION EXPANSION

Appendix EE says that the Pisgah substation will have to be expanded eightfold, from 5 acres to 40 acres (p. 5), to accommodate new facilities needed because of the SES 1 Project.

Data Requests

261. Please provide the basis for the estimate that the Pisgah substation will have to be expanded eightfold, from 5 acres to 40 acres (p. 5), to accommodate new facilities needed because of the SES 1 Project.
262. Please provide any studies or other documents by SCE (or the ISO or any non-SCE entity proposing to expand the Pisgah substation) which discuss the proposed substation size and new facilities, and/or the basis for choosing the size or new facilities.

XIII. PISGAH-LUGO LINE CHANGES

Appendix EE says that the existing Pisgah-Lugo 230 kV line and towers will be removed upon completion of the proposed new Pisgah-Lugo #2 500 kV line.¹⁴

Data Requests

263. Please confirm that the line(s) to be removed include both the Pisgah-Lugo #1 and the Pisgah-Lugo #2 230 kV lines.
264. Please provide the most recent study which explains why the existing lines need to be removed.
265. Please provide the net increase in deliverability from Pisgah (under N-1 conditions) due to adding a new line and removing two existing lines.
266. Please explain whether and how it will be possible to add a new 500 kV line from Pisgah to Lugo prior to removing the existing 230 kV lines in the same corridor, without either (a) construction activities, or (b) the new line itself going outside of the existing ROW.

¹⁴ AFC Appendix EE p. 8.

XIV. ENDANGERED SPECIES ACT (“ESA”) CONSULTATION

Appendix EE says that section 7 ESA consultation with the U.S. Fish and Wildlife Service (“USFWS”) will be required to address desert tortoise impacts of the proposed new Pisgah-Lugo 500 kV line.¹⁵

Data Requests

- 267. Please explain when consultation between the USFWS and Bureau of Land Management will begin?
- 268. Please explain when consultation is expected to be complete?
- 269. Please provide any documents from either the Applicant or the USFWS which address consultation or issues raised by it.

XV. CULTURAL RESOURCE STUDIES

Appendix EE says that cultural resource studies have not yet begun.¹⁶

Data Requests

- 270. Please explain when cultural resource studies began (or are expected to begin).
- 271. Please explain when cultural resource studies are expected to be complete.
- 272. Please provide any documents created or published since November 21, 2008 which address cultural resource issues associated with a new transmission line from Pisgah to Lugo.

XVI. PISGAH-LUGO ROUTE

Appendix EE says that its analysis is not based on an actual route for the proposed Pisgah-Lugo line.¹⁷

Data Request

- 273. If no route has been selected for the proposed Pisgah-Lugo 500 kV line, please explain how Appendix EE is able to identify, to the tenth of a mile,

¹⁵ AFC, Appendix EE p. 21.

¹⁶ AFC, Appendix EE p. 24.

¹⁷ AFC, Appendix EE p. 31.

where the proposed line will lie inside existing ROW, where it will require new ROW, and where it will cross the Mohave River.

XVII. ROW IMPACTS

Appendix EE indicates that the proposed Pisgah-Lugo #2 500 kV line will lie within an existing ROW which borders the Rodman Mountains Wilderness Area, and passes through an ACEC.¹⁸

274. Please explain how the proposed new line will be built, and the existing 230 kV line removed, while staying within the existing ROW and avoiding any impacts to the Rodman Mountains Wilderness.
275. Please explain whether the new line, and the proposed removal of the existing line, are intended to occur entirely within the existing ROW where that ROW crosses an ACEC.

¹⁸ AFC, Appendix EE p. 31.

DECLARATION OF SERVICE

I, Bonnie Heeley, declare that on July 13, 2009, I served and filed copies of the attached CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET TWO, dated July 13, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service listed, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/solarone/SOLARONE_POS.PDF. The document has been sent (1) electronically and (2) via U.S. Mail by depositing in the US Mail at South San Francisco, California, with first-class postage thereon fully prepaid and addressed as provided on the attached Proof of Service list to those addresses NOT marked "email preferred." It was sent for filing to the Energy Commission by sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address shown on the attached Proof of Service list.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, CA this 13th day of July, 2009.

_____/s/_____
Bonnie Heeley

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