

ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037

TEL: (650) 589-1660
FAX: (650) 589-5062

tgulesserian@adamsbroadwell.com

SACRAMENTO OFFICE

520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4715

TEL: (916) 444-6201
FAX: (916) 444-6209

DANIEL L. CARDOZO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
MARC D. JOSEPH
ELIZABETH KLEBANER
RACHAEL E. KOSS
LOULENA A. MILES
ROBYN C. PURCHIA

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL
GLORIA D. SMITH

July 14, 2009

DOCKET

08-AFC-12

DATE	Jul 14 2009
RECD.	Jul 15 2009

Via Electronic Mail and U.S. Mail

Mr. Kent Larson, Vice President
Martifer Renewables Solar Thermal LLC
12555 High Bluff Drive, Suite 100
San Diego, CA 92130

Re: San Joaquin Solar 1 and 2 Hybrid Project (08-AFC-12)
CURE Data Requests Set Two (Nos. 3-35)

Dear Mr. Larson:

California Unions for Reliable Energy (CURE) submits this second set of data requests to Martifer Renewables Solar Thermal LLC for the San Joaquin Solar 1 and 2 Hybrid 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; (4) assess whether the project will be constructed and operated in a safe, efficient and reliable manner; and (5) assess potential mitigation measures.

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 to Commissioners Levin and Boyd and to CURE within 20 days.

2303-017a

July 14, 2009
Page 2

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

Sincerely,

/s/

Elizabeth Klebaner

TAG:bh
Enclosure

STATE OF CALIFORNIA
California Energy Commission

In the Matter of:

The Application for Certification

for the San Joaquin Solar 1 and 2 Hybrid
Power Plant Project

Docket No. 08-AFC-12

CALIFORNIA UNIONS FOR RELIABLE ENERGY
DATA REQUESTS, SET TWO

July 14, 2009

Tanya A. Gulesserian
Elizabeth Klebaner
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
(650) 589-1660 Voice
(650) 589-5062 Facsimile
tgulesserian@adamsbroadwell.com
eklebaner@adamsbroadwell.com
mdjoseph@adamsbroadwell.com

Attorneys for the CALIFORNIA UNIONS
FOR RELIABLE ENERGY

The following data requests are submitted by California Unions for Reliable Energy. Please provide your responses as soon as possible, but no later than August 13, 2009, to each of the following people:

Tanya A. Gulesserian
Adams Broadwell Joseph & Cardozo
601 Gateway Blvd., Suite 1000
South San Francisco, CA 94080
(650) 589-1660
tgulesserian@adamsbroadwell.com

Petra Pless
440 Nova Albion Way
San Rafael, CA 94903
petra@ppless.com

Please identify the person who prepared your responses to each data request. If you have any questions concerning the meaning of any data requests, please let us know.

San Joaquin Solar (“SJS”) 1 & 2

CURE Data Requests Set #2

PROJECT DESCRIPTION

Background: GRADING PLAN

The AFC states that according to the grading and drainage plan 6,200,000 cubic yards of cut and 6,200,000 cubic yards of fill are required.¹ The AFC does not provide a copy of the grading and drainage plan.

Data Requests:

3. Please provide a copy of the grading and drainage plan.

Background: BIOMASS RECEIVING, UNLOADING, HANDLING, PRE-SIZING, AND STORAGE

The AFC project description states that biomass unloading would be conducted in a large covered building equipped with a dedicated fan and associated baghouse to control fugitive dust emissions. Biomass would be unloaded from tractor trailers with hydraulic truck lifts onto an automated conveyor system. Diesel-powered heavy equipment would move biomass on site. A “fuel aggregator” would pre-size biomass.² Applicant’s response to CEC Staff Data Request 18 provides a narrative description of the handling process.³ However, the AFC does not provide a process flow diagram for biomass handling, a schematic showing the layout of the biomass handling and storage building and associated control equipment, a description of the receiving and unloading area, *e.g.*, the use of drive-on scales to determine the quantity of wood on the tractor trailers, or technical information for the equipment that would be employed to handle and pre-size biomass, *e.g.*, the type of conveyor (bucket, belt, screw, chain/drag, oscillating, pneumatic), type of “fuel aggregator” (hammer mill, knife hog), type of screens (scalping disk oscillating, shaker deck), etc. The AFC also does not provide a

¹ AFC, p. 5.3-13.

² AFC, p. 3-7.

³ San Joaquin Solar 1&2 Hybrid Project 3rd Response to CEC Data Request Set #1, 08-AFC-12, Data Response 18.

description of biomass inspection for foreign materials such as metal, stone, and dirt, which must be removed before pre-sizing and combustion.

Data Requests:

4. Please provide a process flow diagram for biomass handling including maximum equipment throughput.
5. Please provide a description of the biomass receiving and unloading area including, *e.g.*, mechanical or electronic drive-on scales or conveyor belt scales, the hydraulic truck lifts, etc.
6. Please provide a schematic drawing showing the biomass handling and storage facility layout including all conveyors, fuel aggregators, and installed emission controls.
7. Please provide a description of the biomass inspection and cleaning procedures for removal of foreign materials such as metals, stone, and dirt, *e.g.*, with magnets, non-ferrous metal detectors, trommel screens, etc.
8. Please provide a description of the automatic conveyor, *e.g.*, bucket, belt, screw, chain/drag, oscillating, pneumatic, etc.
9. Please provide a description of biomass “pre-sizing” by “fuel aggregators” including a discussion of the typical particle sizes of biomass waste products for loading into the fluidized bed combustors and a description of the fuel aggregators including their type (hammer mill, knife hog, etc.), type of screens (scalping disk oscillating, shaker deck, etc.), power supply, loading and unloading, maximum rated throughput, etc.

Background: FLUIDIZED BED COMBUSTION TECHNOLOGY

The AFC states that the Project would use fluidized bed combustion technology as an energy-efficient and environmentally favorable alternative for conversion of principally agricultural-based waste materials with high moisture content.⁴ The AFC does not provide a description or schematic of the proposed fluidized bed combustion technology. Further, while the AFC discusses alternate technologies including conventional simple cycle, integrated gasification combined cycle, coal or other solid fuel conventional furnace/boiler steam turbine, nuclear, geothermal, wind, hydroelectric, and other solar technologies,⁵ it does not provide a discussion of other biomass combustion technologies, including, *e.g.*, cyclonic

⁴ AFC, p. 3-4.

⁵ AFC, pp. 4-4 – 4-5.

burners, pneumatic spreader stoker systems, thermo-chemical gasification systems, and/or pre-drying of biomass to increase the combustion efficiency.

Data Requests:

10. Please provide a description and schematic drawing of the proposed fluidized bed combustion technology, including pressure seals, maximum throughput, etc.
11. Please discuss the type of fluidized bed combustor (in-bed or over-bed feed system), feeder type (spreader, air swept, gravity), fuel requirements (particle size, moisture content, ash content), operating characteristics (residence time, fly ash production), advantages, and disadvantages of fluidized bed combustion technology.

Background: FLY ASH PRODUCTION AND DISPOSAL

The AFC states that the Project would produce approximately 10,000 to 25,000 tons per year of fly ash from each biomass combustion facility for a total of less than 50,000 tons per year.⁶ Elsewhere the AFC states that each plant would generate between 25,000 and 50,000 tons per year of fly ash for a total of 50,000 to 100,000 tons per year for the Project.⁷ Finally, Attachment AQ-1 to Applicant's 3rd Response to CEC Data Request Set #1 state that a total of 30,459 tons of fly ash would be produced each year.⁸ Based on the ash content of the proposed biomass fuel (3.55 to 5.73 percent) indicated in the AFC, the anticipated annual combustion of 450,000 BDT per year of biomass, and assuming a 1 percent moisture content of the fly ash,⁹ it appears that the Project would generate approximately 16,000 to 26,000 tons of fly ash per year.¹⁰

The AFC states that all of the fly ash generated at the Project is anticipated to be marketable for beneficial uses, including the manufacture of aggregate and concrete, soil mineral supplements, bedding material for livestock pens, etc.¹¹

⁶ AFC, p. 3-16.

⁷ AFC, Table 3.4-7, p. 3-15.

⁸ San Joaquin Solar 1&2 Hybrid Project 3rd Response to CEC Data Request Set #1, Attachment AQ-1.

⁹ 1 percent moisture content in fly ash based on Appendix B-2 "Total Project SJS 1&2, Fugitive Emissions from Material Handling."

¹⁰ (biomass combustion: 450,000 BDT per year) x (ash content of biomass: 0.0355 or 0.0573) x (100/99) = (fly ash generation: 16,136 or 26,045 tons per year)

¹¹ AFC, p. 3-16.

Elsewhere, the AFC indicates that the fly ash may be disposed of at a non-hazardous landfill.¹²

Data Requests:

12. Please calculate annual average fly ash production for the Project's two biomass combustion facilities and document your assumptions, or document your assumption in Attachment AQ-1, p. 44 to the Applicant's 3rd Response to CEC Data Request Set #1 that a total of 30,459 tons of fly ash would be produced each year.
13. Please provide fly ash analyses from biomass combustion at similar facilities. When providing percentages, please indicate whether the values are based on "as combusted" or "bone dry."
14. Please state whether fly ash generated by the Project would be disposed of at a landfill. The response should identify the amount of fly ash that would be disposed of in this manner and the receiving landfills.

Background: ON-SITE ELECTRICITY DEMAND

The Project would have a number of on-site electric-powered equipment and facility operations. The AFC does not provide a breakdown of on-site electricity demand.

Data Requests:

15. Please provide estimates for the maximum daily and annual average on-site electricity demand for the Project's electric-powered equipment and facility operations including the reverse osmosis water treatment facility, the "fuel aggregators," conveyors, baghouses, pumps, fans, motors, controls, lighting, heating, ventilation, air conditioning, etc.

¹² AFC, Table 3.4-7, p. 3-15.

AIR QUALITY

Background: BIOMASS COMBUSTOR EMISSIONS

The AFC presents estimates for maximum emissions from biomass combustors assuming operation at 100 percent load with 100 percent wood fuel.¹³ The AFC does not present emissions estimates for the other source of biomass, municipal green waste or for the anticipated fuel mix of 50 percent municipal green waste and 50 percent agricultural wood waste.

Data Requests:

16. Please provide maximum emissions estimates for operating at 100 percent load and using 100 percent municipal green waste and using the anticipated fuel mix of 50 percent municipal green waste and 50 percent agricultural wood waste.

Background: AMMONIA TANK BREATHING LOSSES

The Project would include four 20,000-gallon storage tanks containing 19.1 percent aqueous ammonia.¹⁴ The AFC does not provide an estimate of fugitive ammonia breathing losses from the tanks.

Data Requests:

17. Please provide estimates for breathing losses of ammonia from the Project's four 20-gallon storage tanks.

¹³ AFC, Appendix B-3 "EPI Emission Predictions."

¹⁴ AFC, p. 5.15-9.

WASTE MANAGEMENT

Background: EVAPORATION POND RESIDUES

The AFC proposes to use a lined evaporation pond to dispose of the Project's wastewater streams (with the exception of the sewage which will be routed to an on-site septic system).¹⁵ The AFC contains no discussion of the quantity of residual solids generated in the evaporation ponds during the life of the Project and their ultimate disposal. Depending on the concentration of constituents, the dewatered residues might have to be disposed of as a hazardous waste. This would require special handling and disposal.

Data Requests:

18. Please provide a discussion of the disposal of solids and removal of the evaporation ponds. Please indicate whether solids would be removed occasionally or only at the end of the Project's operational life. Please quantify the amount of solids expected.
19. Please provide an estimate of the chemical composition of the dewatered residues in the evaporation ponds in mg/kg for each constituent.

Background: SOLAR MIRROR BREAKAGE

The AFC's waste management section does not discuss the breakage of mirrors. At the SEGS plants, about 3,000 mirrors are replaced each year.

Data Requests:

20. Please discuss and estimate the quantity of the annual expected mirror breakage at the Project's solar fields.

¹⁵ AFC, p. 5.5-13.

HAZARDOUS MATERIALS

Background: HERBICIDE USE FOR SOLAR FIELDS

The Project would use herbicides to control vegetation and weed growth in the solar fields to prevent grass or brush fires that could damage the solar panels and ignite the heat transfer fluid. Neither the AFC nor the Applicant's responses to CEC Staff's data requests provide any information on the type, frequency, or method of application for herbicides at the Project site. The Applicant's responses to CEC Staff's data requests state that the persistence of various herbicides in the soil is discussed in response to CEC Staff Data Request 96.¹⁶ Unfortunately, the Applicant's response package includes information that is not a response to CEC Staff's data request 96.

Data Requests:

21. Please provide information regarding the estimated frequency of herbicide application at the solar field, the annual quantity of herbicide(s) used, the active ingredient content in the formulation(s), the type of application, and the amount of active ingredient applied per application.
22. Please indicate whether professional pesticide applicators or Project personnel would apply the herbicide(s) at the Project site. If the latter, please discuss any pesticide application training Project personnel would receive.
23. Please discuss best management practices for herbicide applications to ensure protection of groundwater and biological resources and indicate how these would be implemented at the Project.
24. Please provide a discussion of the persistence of herbicides that may be used for brush and weed control at the Project's solar fields.

¹⁶ Applicant's Response to CEC Data Request #91.

NOISE

Background: PILE DRIVING

The AFC's geologic hazards and resources section for the Project indicates that pile foundations may be required for heavily loaded structures.¹⁷ Yet, the AFC's noise section claims that only conventional construction techniques (which generally exclude pile-driving) would be used.¹⁸

Data Requests:

25. Please identify what type of pile foundations (cast-in-hole piles or driven piles) will be used for the Project's structures that support heavy equipment, e.g., the steam turbines or boilers.
26. If driven piles will be used to support the Project's heavily loaded structures, please identify the type of pile driver (impact, vibratory) that will be used to construct the supporting piles.
27. Please identify the construction month during which pile drivers will be used.
28. Please identify the number of hours per day pile driving would be conducted and the daily schedule for pile driving.
29. Please provide a discussion and quantitative analysis of potential noise impacts from pile driving.

¹⁷ AFC, p. 5.3-12.

¹⁸ AFC, p. 5.12-10.

LAND USE

Background: WILLIAMSON ACT CONTRACT CANCELLATION

The AFC states that, “the Project site has 469 acres under Williamson Act contract on parcel 085-030-57S,” Contract No. 3219.¹⁹ Elsewhere, the AFC provides that the Williamson Act contract is for a 468.88 acre parcel.²⁰ The remaining parcels comprising the Project site are zoned for exclusive agriculture.²¹ According to the AFC, the contract cancellation process was initiated with the County of Fresno and a notice of non-renewal was submitted to Jared Nimer of the County of Fresno Department of Public Works and Planning.²² Elsewhere in the AFC, it states that the notice of non-renewal will be filed.²³ Once the notice of non-renewal is recorded, the non-renewal period will run for nine years. However, the AFC states that the Williamson Act contract will be canceled prior to Project construction.²⁴

Williamson Act contract cancellation may be granted only in exceptional circumstances.²⁵ Contract cancellation requires the Fresno Board of Supervisors to make findings of public interest or consistency, pursuant to California Government Code section 51282(a). In some cases, the contract or local government may require both public interest and consistency findings before approval of cancellation may be granted.²⁶ In order to find that the cancellation is in the public interest, Fresno County must find that,

- (1) other public concerns substantially outweigh the objectives of the Williamson Act; and
- (2) there is no proximate, noncontracted land which is both available and suitable for the proposed use, or, the development of the contracted land would provide more contiguous patterns of urban development.²⁷

¹⁹ AFC, p. 5.9-1

²⁰ AFC, p. 5.9-6.

²¹ AFC, p. 5.9-1

²² AFC, p. 5.9-2 n.1.

²³ AFC, p. 5.9-6.

²⁴ AFC, p. 5.9-6.

²⁵ 62 Ops. Cal. Atty. Gen. 233 240 (1979).

²⁶ State of California Department of Cancellation, Williamson Act FAQ, available at http://www.consrv.ca.gov/dlrp/lca/FAQ/Pages/contract_cancellations.aspx, accessed June 8, 2009.

²⁷ California Government Code § 51282(c).

In order to find that the cancellation is consistent with the purposes of the Williamson Act, the Board/Council must find that,

- (1) the cancellation is for land on which a notice of nonrenewal has been served;
- (2) cancellation is not likely to result in the removal of adjacent lands from agricultural use;
- (3) cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan;
- (4) cancellation will not result in discontinuous patterns of urban development; and
- (5) there is no proximate, noncontracted land which is both available and suitable for the proposed use or that development of the contracted land would provide more contiguous patterns of urban development.²⁸

The AFC does not rank alternative Project locations, or state which site would be the preferred site if the Applicant does not obtain a contract cancellation.

Data Requests:

30. Please state the number of acres within the Project site that are subject to a Williamson Act contract and their corresponding assessor parcel numbers.
31. Please state the number of Williamson Act contracts that apply to the Project site.
32. Please provide a copy of all applicable Williamson Act contracts.
33. Please state whether a notice of non-renewal was filed with the County of Fresno and the date of filing.
34. If a notice of non-renewal has been filed, please indicate whether and when it was recorded.

²⁸ California Government Code § 51282(b).

35. Please rank alternative Project locations and state which would be the preferred Project site alternative in the event that Fresno County denies cancellation of the subject Williamson Act contracts.

Dated: July 14, 2009

Respectfully submitted,

/s/

Tanya A. Gulesserian

Elizabeth Klebaner

Adams Broadwell Joseph & Cardozo

601 Gateway Blvd., Suite 1000

South San Francisco, CA 94080

(650) 589-1660 Telephone

(650) 589-5062 Fax

tgulesserian@adamsbroadwell.com

Attorneys for California Unions for Reliable Energy

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of:

The Application for Certification for the
San Joaquin Solar 1 and 2 Hybrid Power
Plant Project

Docket No. 08-AFC-12

DECLARATION OF SERVICE

I, Bonnie Heeley, declare that on July 14, 2009, I served and filed copies of the attached **CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET TWO**. 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/sjsolar/SJSOLAR_POS.PDF. The document has been sent (1) electronically, and (2) via US Mail by depositing in the US Mail at South San Francisco, CA, with first-class postage thereon full 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, California, on July 14, 2009.

_____/s/_____
Bonnie Heeley

SERVICE LIST

Kent Larson
Project Manager
12555 High Bluff Drive
San Diego, CA 92130
kent.larsen@spinnakerenergy.net

Doug Wert, Chief Operating
Officer
Martifer Renewables Solar
Thermal
12555 High Bluff Drive, Suite
100
San Diego, CA 92130
Doug.wert@spinnakerenergy.net

Ann Runnalis
URS
1615 Murray Canyon Road
Suite 1000
San Diego, CA 92108
anne_runnalls@urscorp.com

Christopher T. Ellison
Ellison, Schneider & Harris
L.L.P.
2600 Capitol Avenue, Suite 400
Sacramento, CA 95816-5905
cte@eslawfirm.com

Robert Joyce, Corporate Counsel
Joyce Law Group
7848 Ivanhoe Avenue
La Jolla, CA 92307
Robert_joyce@joycelawgroup.net

California ISO
E-mail Preferred
e-recipient@caiso.com

Tanya A. Gulesserian
Adams Broadwell Joseph &
Cardozo
601 Gateway Boulevard, #1000
South San Francisco, CA 94080
E-mail Preferred
tgulesserian@adamsbroadwell.com

Julia Levin
Commissioner and Presiding
Member
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
jlevin@energy.state.ca.us

James D. Boyd
Vice Chairman and Associate
Member
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
jboyd@energy.state.ca.us

Raoul Renaud
Hearing Officer
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
rrenaud@energy.state.ca.us

Joseph Douglas
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
jdouglas@energy.state.ca.us

Robin Mayer
Staff Counsel
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
rmayer@energy.state.ca.us

Elena Miller
Public Advisor
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
publicadviser@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814
ldecarlo@energy.state.ca.us

California Energy commission
Attn: docket 08-AFC-12
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

