

# Memorandum

<b>DOCKET</b>	
<b>08-AFC-12</b>	
DATE	<u>MAR 25 2009</u>
RECD.	<u>MAR 25 2009</u>

**Date:** March 25, 2009  
**Telephone:** (916) 654-3911  
**File** 08-AFC-12

**To:** Commissioner Julia Levin, Presiding Member  
Commissioner James D. Boyd, Associate Member

**From:** California Energy Commission - Joseph Douglas  
1516 Ninth Street Siting Project Manager  
Sacramento, CA 95814-5512

**Subject:** San Joaquin Solar 1 & 2 Hybrid Project (08-AFC-12)  
**ISSUES IDENTIFICATION REPORT**

Attached is staff's Issues Identification Report for the San Joaquin Solar 1 & 2 Hybrid Project (08-AFC-12). 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 present the issues report at the Informational Hearing and Site Visit to be held on April 7, 2009.

This report also provides a proposed schedule pursuant to the 12-month Application for Certification (AFC) process, with a footnote discussion of staff's current workload.

Attachment

cc:  
Proof of Service List  
Docket 08-AFC-12

# **San Joaquin Solar 1 & 2 Hybrid Project**

(08-AFC-12)

## **ISSUES IDENTIFICATION REPORT**

**CALIFORNIA ENERGY COMMISSION**

**Siting, Transmission and Environmental Protection Division**

# **ISSUES IDENTIFICATION REPORT San Joaquin Solar 1 & 2 Hybrid Project**

(08-AFC-12)

## **Table of Contents**

<b>PROJECT DESCRIPTION.....</b>	<b>3</b>
<b>POTENTIAL MAJOR ISSUE.....</b>	<b>4</b>
<b>AIR QUALITY.....</b>	<b>5</b>
<b>LAND USE.....</b>	<b>6</b>
<b>RELIABILITY.....</b>	<b>7</b>
<b>TRANSMISSION SYSTEM ENGINEERING.....</b>	<b>7</b>
<b>WASTE MANAGEMENT.....</b>	<b>8</b>
<b>WATER RESOURCES.....</b>	<b>9</b>
<b>SCHEDULING.....</b>	<b>9</b>

# ISSUES IDENTIFICATION REPORT

California Energy Commission Staff

## PURPOSE OF THE REPORT

---

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of potential issues that have been identified in the case thus far. These issues have been identified as a result of our discussions with federal, state, and local agencies, and our review of the San Joaquin Solar 1 & 2 Hybrid Project (SJS 1 & 2) Application for Certification (AFC) and the AFC Supplement submitted for this project, Docket Number 08-AFC-12. The Issues Identification Report contains a project description, summary of potentially significant engineering and environmental issues, and a discussion of the proposed project schedule. The staff will address the status of these issues and progress towards their resolution in periodic status reports to the Committee.

## PROJECT DESCRIPTION

---

The SJS 1 & 2 hybrid project will consist of two adjacent hybrid-design solar thermal electric generating plants with separate control facilities. Each plant would be comprised of a solar field and a biomass combustion facility. Each of the two plants will produce up to a nominal 53.4 megawatts (MW) net of renewable energy. The two plants will be owned and operated by San Joaquin Solar 1 LLC and San Joaquin Solar 2 LLC. The major components of each plant include the solar field, a biomass combustion facility, a power block and the transmission interconnection. SJS 1 will be located on the northern portion of the site; SJS 2 will be located on the southern portion of the proposed site.

During daytime solar hours, each plant would generate 53.4 MW of net electric power production from the solar fields. When solar radiation is less intense, solar generation can be supported with biomass combustion generation up to the rated capacity of the steam turbine. During nighttime hours, biomass combustion would provide up to 40 MW net from each plant without any solar input and would maintain the solar field in a hot-standby condition such that quick transfer to solar production can be accomplished when solar radiation is again available. It is currently anticipated that the SJS project will be on line and in commercial service by the second quarter of 2011.

The City of Coalinga's wastewater treatment effluent would be the main water supply for the project. During periods of peak use, groundwater from the existing onsite well would be used to augment the wastewater plant's treated effluent supply. However, groundwater is proposed to be the main water source until the treated wastewater effluent is available for use, projected for the second quarter of 2011.

The project transmission system will require construction of approximately 6 miles of 230 kV transmission line. Two potential transmission line routes are presented for certification. The proposed transmission line route will extend from the southeast corner of the site to the east approximately 5 miles, traveling approximately one mile south of and parallel to West Jayne Avenue. After the transmission line crosses Interstate 5, it would travel north one mile to West Jayne Avenue and continue 0.25 mile to the Pacific Gas & Electric's Gates Substation.

If approved, construction of the project would begin in March of 2010 and would last approximately 15 months. If approved, it is currently anticipated that the project would be on line and in commercial service in the spring of 2011.

## **POTENTIAL MAJOR ISSUES**

---

This portion of the report contains a discussion of potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report might not include all of the significant issues that may arise during the case. Discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based on comments from other government agencies and on our judgment of whether any of the following circumstances could occur:

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

The following table lists all the subject areas evaluated and notes Air Quality, Land Use, Reliability, Transmission System Engineering, Waste Management, and Water Resources as areas where potentially significant issues have been identified. Identification of an area as having no potential issues does not mean that an issue will not arise related to the subject area during the course of the AFC process.

<b>Subject Area</b>	<b>DRs</b>	<b>Major Issues</b>	<b>Subject Area</b>	<b>DRs</b>	<b>Major Issues</b>
Air Quality	Yes	Yes	Project Overview	No	No
Alternatives	No	No	Public Health	Yes	Yes
Biological Resources	Yes	No	Reliability	Yes	Yes
Cultural Resources	Yes	No	Socioeconomics	Yes	Yes
Efficiency	Yes	No	Soils and Water Resources	Yes	Yes
Facility Design	Yes	No	Traffic and Transportation	Yes	No
Geologic Hazards	Yes	No	Trans. Line Safety and Nuisance	Yes	No
Hazardous Materials Handling	Yes	No	Transmission System Engineering	Yes	Yes
Land Use	Yes	Yes	Visual Resources	Yes	No
Noise	Yes	No	Waste Management	Yes	Yes
Paleontological Resources	Yes	No	Worker Safety	Yes	No

Note: DR= Data Request  
TBD = To Be Determined

This report does not limit the scope of staff's analysis throughout this proceeding, but it acts to aid in the analysis of the potentially significant issue that the SJS 1 & 2 proposal poses. The following discussion summarizes the potential issue, identifies the parties needed to resolve the issues, and where applicable suggests a process for achieving resolution. At this time, staff does not see these potential issues as non-resolvable.

## **AIR QUALITY**

---

Staff reviewed the application for the SJS 1 & 2 hybrid project and found the following potential air quality issues that could delay the Energy Commission review process.

### **Mobile Source Emissions**

The AFC shows that the SJS 1 & 2 hybrid project would cause substantial emissions from offsite mobile emission sources, mainly for delivering biomass fuel to the site. For example, particulate matter is a nonattainment pollutant in the San Joaquin Valley Air Pollution Control District (SJVAPCD), and the project's mobile sources (i.e., delivery trucks) would contribute nearly 300 tons per year of inhalable particulate matter under ten microns in diameter (PM10). For comparison, a natural gas-fired power plant of this capacity would typically generate much less than 100 tons per year PM10.

Energy Commission staff needs to consider all stationary and mobile source emissions in the air quality impact analysis, and how the project could change baseline conditions. Staff needs to know whether the project would be likely to reduce baseline emissions from activities that occur today related to how biomass fuel is currently handled (whether through open burning or solid waste disposal) and whether biomass is

currently moved to its destination by truck or rail or some other means. More detailed baseline emissions information is needed for staff to describe the likely net emissions changes caused by operating the project. The applicant's estimate of emissions offset requirements (AFC Table 5.2-24) does not yet include the project's proposed mobile source emissions. Staff cannot develop a strategy for mitigating or offsetting the new emissions until after the net emission changes caused by the project are quantified for all stationary and mobile sources. Staff is developing data requests to investigate the baseline and project-related net emissions changes.

### **Emission Reduction Credits**

It is not clear that the applicant's proposed mitigation, which includes emission reduction credits (ERCs) as offsets, would satisfy San Joaquin Valley Air Pollution Control District (SJVAPCD) requirements or result in all nonattainment pollutant and their precursor emissions being offset at a minimum one-to-one basis. The applicant's mitigation proposal involves an ERC package that is only tentatively defined, and the application does not include a proposal to mitigate or offset mobile source emissions, such as those from delivery of biomass fuel to the site. The SJVAPCD will need to conduct a case-specific analysis of the proposed ERCs and any trading schemes after they are defined by the applicant. Energy Commission staff will then need to independently consider whether the offsets would mitigate any significant impacts from project-related stationary and/or mobile sources. Until the ERC package is clearly defined, delays are likely. Additionally, it is Energy Commission staff's long-standing position that mitigation of all nonattainment pollutant and precursor emissions be of sufficient quantity to achieve a one-to-one offset. Without proper offset mitigation for proposed emissions, the project could contribute substantially to existing violations of the state and federal ambient air quality standards. Staff is addressing these issues through data requests to the applicant.

## **LAND USE**

---

The applicant notes that 469-acres of the 640-acre project site are under an agricultural land preservation contract (#3219) pursuant to the Williamson Act and they intend to file a Notice of Non-renewal with the Fresno County Department of Public Works and Planning. Once the Notice has been filed, a petition for cancellation of the contract can be filed with the Fresno County Board of Supervisors. This would require input from the California Department of Conservation and the Fresno County's Agricultural Land Conservation Committee. This petition must be approved by the Fresno County Board of Supervisors after at least two publicly noticed hearings. The Board can approve the cancellation based on findings such as whether or not the cancellation is likely to result in the removal of adjacent lands from agricultural use. If the cancellation is approved, a fee determined by the County Assessor and equal to 12.5 percent of the market value of the parcel is paid by the applicant and forwarded to the State of California.

Depending on the Board's schedule, the county's cancellation process could take up to one year. In addition, there is a 180-day appeal period for a cancellation. As such, the

time frame for cancellation and the appeal period could significantly delay the Energy Commission's certification process. To date, staff has been advised by Fresno County staff that the initial Notice of Non-renewal has not been filed. Staff is concerned that this process has not begun and, because of the size of the acreage involved, the Fresno County Board of Supervisors review process may be longer than normal. Staff is addressing these issues through data requests to the applicant.

## **RELIABILITY**

---

In order for the project to operate reliably, there needs to be a reliable source of fuel supply. A study was performed for the applicant that demonstrates the quantities of biomass fuel needed for the project are available (AFC § 3.4.3.2). However, staff needs assurance that the fuel suppliers are willing and ready to supply the required quantities throughout the 20 year life of the project.

According to the applicant, the biomass fuel would be trucked in to the site. Staff needs to know how far (how many miles) these trucks would travel to reach the project site from the supply location(s). In the event the route on which these trucks would travel is closed for a period of time, staff needs to know how the fuel would be transported to the site in a timely manner.

Also, the methods of transportation and storage of the biomass fuel, as proposed by the applicant, cause concerns about how the fuel would be protected from rain and wind. Staff is addressing these issues through data requests to the applicant.

## **TRANSMISSION SYSTEM ENGINEERING**

---

The California Environmental Quality Act (CEQA) requires the identification and description of the "direct and indirect significant effects of the project on the environment." The Application for Certification requires discussion of the "energy resource impacts which may result from the construction or operation of the power plant." For the identification of impacts on the transmission system resources and the indirect or downstream transmission impacts, staff has previously relied on the System Impact Study (SIS) according to the previous guidelines.

The SIS analyzes the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the SIS determines that the project will cause a violation of reliability standards, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include the construction of downstream transmission facilities. The CEQA requires the analysis of any downstream facilities for potential indirect impacts of the proposed project. Without a completed California ISO SIS, staff is not able to fulfill the CEQA requirement to identify the direct and indirect effects of the proposed project.



Staff has received a copy of the signed Large Generator Interconnection Study Agreement (LGISA) dated October 24, 2008 between the applicant's parent company (Martfer Renewables Solar Thermal LLC) and the California Independent System Operator (ISO), and proof of payment. The California ISO's generator Interconnection study process under the new guidelines is in transition from a queue or serial SIS to a cluster window process for the Phase 1 and Phase 2 Interconnection studies. This transition has caused significant delays in the interconnection studies for several projects. According to the latest information the Phase 1 Interconnection study (same as the SIS except it will be done with several queue projects in the same region together) should be completed by July, 2009 and thus is expected by staff at the end of July or early August of 2009. Because staff does not have the Phase 1 Interconnection study there are two potential issues that could delay the staff analysis of the San Joaquin Solar 1 & 2 hybrid project:

1. If the Phase 1 Interconnection study report is not received by early August 2009, staff will be unable to determine whether or not the interconnection and operation of the project will result in reliability criteria violations and staff will be unable to identify any transmission facilities downstream of the first point of interconnection required for the reliable interconnection of the proposed project.
2. If the Phase 1 Interconnection study identifies significant downstream facilities or upgrades (i.e. transmission line reconductoring or major substation expansion) that are required for the reliable interconnection of the project, the applicant will need to provide an environmental analysis of these facilities for staff's independent review. Staff is addressing these issues through data requests to the applicant.

## **WASTE MANAGEMENT**

---

The SJS 1 & 2 hybrid project proposes to recycle both non-hazardous and hazardous wastes to the extent possible, and also proposes to implement a waste minimization program. Staff fully supports these efforts. However, it appears that the project AFC only provides vague information on potential reuse, sale, or disposal of the fly ash that will result from the biomass combustion process. Waste from the biomass combustion may be as much as 50,000 tons per year. Disposal of this volume of waste could result in a significant impact to a landfill. The AFC does not identify the potential purchasers or recycling facilities that will be used to minimize landfill disposal of the fly ash. Additional information will be needed on the location, capacity, materials accepted, and regulatory status of recycling facilities to be used to manage project recyclable materials and wastes. Staff is addressing these issue through data requests to the applicant.

## **WATER RESOURCES**

---

The SJS 1 & 2 hybrid project proposes to use a combination of groundwater and recycled water for cooling and other processes. The average annual water requirement of the proposed project would be 2,036 acre-feet with a maximum requirement of 2,821

acre-feet. The City of Coalinga's WWTP would only be able to supply recycled water at the rate of approximately 1,049 to 1,128 acre-feet per year (AFY).

Secondary or tertiary recycled water would be available in June 2011 when the City of Coalinga's wastewater treatment plant (WWTP) is expected to be constructed and operational. SJS1 is expected to be operational during the first quarter of 2011 and SJS2 during the second quarter 2011.

Groundwater would be pumped from the Pleasant Valley Groundwater Sub-basin. The groundwater from this sub-basin has limited uses because of high total dissolved solids concentrations. Uses have been currently limited to agriculture where it has been used for irrigation of salt tolerant crops. Although this groundwater has limited uses, pumping continues and water levels appear to be in decline. This decline suggests there may be overdraft of the sub-basin and there is potential for significant environmental impacts. Since the sub-basin is in a state of overdraft, any additional project pumping could have a significant cumulative long-term impact and may result in significant impacts to other users or environmental resources. Data provided by the applicant shows the TDS concentration of the groundwater, with treatment, may be a potential drinking water supply or supply for other beneficial uses. Staff is addressing these issues through data requests to the applicant.

## **SCHEDULING**

---

Following 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; the timing of the San Joaquin Valley Air Pollution Control District (SJVAPCD) filing of the Determination of Compliance; determinations by other local, state and federal agencies; and other factors not yet known.

### **STAFF'S PROPOSED SCHEDULE – San Joaquin Solar 1 & 2 (08-AFC-12)**

	<b><u>ACTIVITY</u></b>	<b><u>DATE</u></b>
1	Applicant files Application for Certification (AFC)	11/26/08
2	Commission's determination that AFC is complete	3/11/09
3	Staff files Issue Identification Report	3/25/09
4	Staff files data requests	4/2/09
5	Informational Hearing and Site Visit	4/7/09
6	Applicant provides data responses	5/1/09
7	Data response and issue resolution workshop**	5/27/09
8	Staff and applicant each file Status Report 1	6/25/09
9	Staff Receives Preliminary Determination of Compliance (PDOC)	7/09
10	Staff Receives Cal ISO Phase I Interconnection Study	7/09

11	Local, state and federal agency draft determinations	7/9/09
12	Staff and applicant each file Status Report 2	8/6/09
13	Staff files Preliminary Staff Assessment (PSA)	8/27/09
14	Local, state and federal agency final determinations	9/7/09
15	PSA workshop**	9/9/09
16	Staff and applicant each file Status Report 3	9/16/09
17	Staff files Final Staff Assessment (FSA)	10/11/09
18	Prehearing Conference*	TBD
19	Evidentiary hearings*	TBD
20	Committee files proposed decision*	TBD
21	Hearing on the proposed decision*	TBD
22	Committee files revised proposed decision*, if necessary	TBD
23	Commission Decision**	3/10/10

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

\*\* Estimated date.

**Please Note:** Under the Warren-Alquist Act – Public Resources Code Section 25540.6 et seq, the standard licensing process for an Application for Certification is twelve months. However, the Siting, Transmission and Environmental Protection Division (STEP) currently has 26 projects in-house, approximately four times the historical workload, and this may make achieving the 12-month schedule problematic. In addition, STEP is a participant in the state's furlough program, which is expected to terminate in early 2010.

Energy Commission staff will do its best to review the San Joaquin Solar 1 & 2 Hybrid project in as timely a manner as possible.



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](http://WWW.ENERGY.CA.GOV)

**APPLICATION FOR CERTIFICATION  
FOR THE *SAN JOAQUIN SOLAR UNITS 1 AND 2  
LICENSING PROJECT***

**Docket No. 08-AFC-12**

**PROOF OF SERVICE**  
*(Established 2/27/2009)*

**APPLICANT**

Kent Larson  
Project Manager  
12555 High Bluff Drive  
San Diego, CA 92130  
[kent.larsen@spinnakerenergy.net](mailto: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](mailto:Doug.wert@spinnakerenergy.net)

**APPLICANT'S CONSULTANTS**

Anne Runnalls  
URS  
1615 Murray Canyon Road  
Suite 1000  
San Diego, CA 92108  
[anne\\_runnalls@urscorp.com](mailto:anne_runnalls@urscorp.com)

**COUNSEL FOR APPLICANT**

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

Robert Joyce, Corporate Counsel  
Joyce Law Group  
7848 Ivanhoe Avenue  
La Jolla, Ca 92037  
[Robert.joyce@joycelawgroup.net](mailto:Robert.joyce@joycelawgroup.net)

**INTERESTED AGENCIES**

California ISO  
[e-recipient@caiso.com](mailto:e-recipient@caiso.com)

**INTERVENORS**

**ENERGY COMMISSION**

**JULIA LEVIN**  
Commissioner and  
Presiding Member  
[jlevin@energy.state.ca.us](mailto:jlevin@energy.state.ca.us)

**JAMES D. BOYD**  
Vice Chairman and  
Associate Member  
[jboyd@energy.state.ca.us](mailto:jboyd@energy.state.ca.us)

Raoul Renaud  
Hearing Officer  
[rrenaud@energy.state.ca.us](mailto:rrenaud@energy.state.ca.us)

Joseph Douglas  
Project Manager  
[jdouglas@energy.state.ca.us](mailto:jdouglas@energy.state.ca.us)

Lisa DeCarlo  
Staff Counsel  
[ldecarlo@energy.state.ca.us](mailto:ldecarlo@energy.state.ca.us)

Robin McCall  
Staff Counsel  
[rmccall@energy.state.ca.us](mailto:rmccall@energy.state.ca.us)

Elena Miller  
Public Adviser  
[publicadviser@energy.state.ca.us](mailto:publicadviser@energy.state.ca.us)

## Declaration of Service

I, Mineka Foggie, declare that on March 25, 2009, I served and filed copies of the attached San Joaquin Solar 1 & 2 Issues Identification Report. 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/index.html>]. 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. 08-AFC-12  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512

[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

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

Original Signature in Dockets  
Mineka Foggie