

Tom Budlong
3216 Mandeville Canyon Road
Los Angeles, CA 90049-1016

DOCKET	
08-AFC-5	
DATE	<u>MAY 14 2010</u>
RECD.	<u>MAY 14 2010</u>

STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of:)
)
)
APPLICATION FOR CERTIFICATION)
FOR THE IMPERIAL VALLEY SOLAR)
PROJECT (FORMERLY SES SOLAR TWO))
_____)

DOCKET NO. 08-AFC-5

REQUEST OF INTERVENOR TOM BUDLONG FOR ADDITIONAL TIME TO RESPOND TO
SUPPLEMENTAL APPLICANT SUBMISSION

May 24 2010 EVIDENTIARY HEARING

May 14, 2010

Tom Budlong
3216 Mandeville Canyon
Los Angeles, CA 90049

Jeffery D Byron
Commissioner and Presiding Member
California Energy Commission
1515 Ninth Street, MS-15
Sacramento, CA 95814

Anthony Eggert, Commissioner,
California Energy Commission
1515 Ninth Street, MS-15
Sacramento, CA 95814

Raoul Renaud, Hearing Officer
California Energy Commission
1515 Ninth Street
Sacramento, CA 95814

Dear Sirs,

Re: Applicant's Supplement, dated May, 2010, to the Imperial Valley Solar AFC (08-AFC-5)
Opening Testimony, May 24 Evidentiary Hearing:

Please reference my May 12 letter concerning the Applicant's May, 2010 supplement to the Imperial Valley AFC, and CURE's May 10, 2010 letter concerning that supplement. In my May 12 letter, attached to this filing, I expressed concern that the supplement was issued with insufficient time to provide responsible comment and testimonial response at the May 24 Evidentiary Hearing.

In the day since filing that letter I have had a little more time for preliminary examination of the supplement and have found items that are unclear and require additional definition before making well considered comments. Questions raised by the examples below may possibly be discoverable given a normal time period. Please understand that these examples are not intended to be my testimony or comments on the supplement.

I have not had time for even a cursory look at the hundreds of pages of tables that make up the bulk of the supplement.

I also rely on staff assessment of applicant submissions. Understandably, a staff assessment for this supplement does not exist for lack of time.

For these reasons, I repeat the request in my May 10 letter for adequate additional time to present testimony. Certainly the increased hydrogen amount demands very careful analysis by staff and commenters. Hydrogen has extraordinary potential for extraordinary harm. Notice that the largest tank appears to hold 45 times as much hydrogen as previously planned. Planning changes to the hydrogen system must not be rushed, since the consequences of error can be so large. Note also that this is the third revision to the H2 supply apparatus since the original AFC, an indication that the SunCatcher design has not matured and is still under development.

Hydrogen System

Section 2.15 of the Supplement describes an expanded hydrogen supply system.

- The description of the configuration is verbal and somewhat confusing, and I have not found a supporting diagram. As an example, six tank descriptions are used, and it's not clear if there are six kinds of tanks, or some tanks are called different names. The tanks in the system mentioned in the description are:

steel storage tank	high pressure storage tank
high pressure supply tank	low pressure dump tank
low pressure supply tank	high pressure surge tank
- The hydrogen capacities of the various components have increased from the previous design, and have increased by substantially different ratios. I haven't yet found an explanation for the increase or the different ratios.

Component	Previous size	New size	Increase
H ₂ stored at each SunCatcher	3.4	11	3.2 times bigger
Low pressure supply tank	648	9,900	15.3 times bigger
High pressure surge tanks	21.5	489	22.7 times bigger
High pressure supply tank	648	29,333	45 times bigger
Steel storage tank (stores H ₂ from the generator)	33,000	33,000	None
(Tank sizes are in scf – standard cubic feet)			

- The description mentions hydrogen will be stored at each SunCatcher, without explaining if the storage is in another tank connected to the system, or is the working fluid in the Stirling engine, or is someplace else.

Centralized Hydrogen System Description (p.2.15-2, bottom)

Fundamental errors are in the description:

- ‘...*electrolysis process will require approximately 146 watts/scf [of H₂] of electricity...*’. Watts are a rate of energy flow and will produce a rate of hydrogen flow. An scf [standard cubic foot] is a fixed amount of hydrogen, produced by a fixed amount of energy. Perhaps the author meant 146 watt-hours per scf, or perhaps 146 watts would produce 1 scf per hour, or per minute.
- ‘*The project will require 100 kilowatts per day.*’ Again, kilowatts are a rate of energy flow. Kilowatts per day is nonsensical in this context.

Comment and analysis is impossible with these errors. The explanation is probably simple correction of a simple error, but time is required to present the question and receive an answer.

Accidental Release Process

The worst case H₂ explosion analysis has questions whose answers are not quickly found:

- It assumes immediate ignition of a hydrogen cloud, with 10% of the H₂ participating. I could not find explanation of why 10% was chosen, the fate of the other 90%, or result of delayed ignition where all the H₂ participates.
- The effect of this worst case scenario is given as 1 psi one third of a mile away. Apparently not described are the effects (environmental impacts) of a 1 psi overpressure. (Examples are that 1 psi puts a force of approximately 2,500 pounds on a 32” x 80” residential door, and approximately 10,000 pounds on a 15’ x 4½’ automobile.)
- Mitigation measures HAZMAT-7 and HAZ-2 are mentioned. Not found is analysis of the adequacy of these measures for the increased amounts of hydrogen.
- The table on page 2.15-11 says ‘...will not be subject to either state ... or federal...’. But the following paragraph says ‘...Project will be subject to either state or federal...’. This appears to be a discrepancy that would succumb to a simple explanation or correction.

Boyer Well Location

The lower left corner of Figure 1-3 in the supplement shows the location of the Boyer well.

During a site visit on April 24 I stopped at the Texaco station at the same I-8 off ramp as the Boyer well. Two items:

- The station’s sewage disposal system was a dirt berm leading to unpaved dirt north of the paved parking lot. The berm guided the open sewage stream. See photos 1 and 2. Terry Weiner was at the site visit and reports that she has notified the Imperial County Health Department. See Box 1, her email to me. It’s unknown how long this situation existed.
- The south side of the station has an interesting facility whose purpose is unknown to me. A cluster of approximately 4-inch pipes exit the ground into what appear to be a collector arrangement. A single pipe leads to what appears to be a combustion apparatus. Since I was not aware that a well to be used on the project (the Boyer well) is in the vicinity, I did not recognize it as affecting the project and did not observe it more carefully than simple curiosity. Our speculation, with no basis other than the visual inspection, is that it is removing ground contaminant, possibly from leaking underground gasoline storage tanks.

Google Earth’s distance tool shows the Texaco station to be a little less than 0.2 miles from the location of the Boyer Well as shown on Figure 1-3 of the supplement. See Figure 3.

Do these possible pollution sources affect the quality of the Boyer well water? The answer may exist in the supplement or prior documentation and might be found if time permits.



Photo 1: Sewage flow guided by dirt berm, leading to north side of parking pavement.



Photo 2: Sewage stream. The foreground building is a closed restaurant. The building in the back is the Texaco station.



Figure 3: Google Earth of the Texaco station with the open sewage disposal, and the Boyer well site. The connecting line is 0.17 miles. (Ocotillo exit from I-8.)

Hi,

I sent the photos on Monday April 26th to the Imperial County Health Department contact person I had talked to on April 22nd. Imperial County immediately went to the site on Monday afternoon and reported back to me that the owner was going to have to close the restrooms as well as have the septic pumped and probably build an expanded system with new leach lines.

We believe the leach lines had been leaking for years because the brittle bush in the area of the leach lines was in bloom and leafed out all year long. I had noticed this and realized that there was probably a leak somewhere but until the stinking pool of sewage developed, I had no idea it would have been the septic system.

I will take photos of how it looks when I go through there on Monday as well as photograph the furnace and storage of "non-hazardous waste" and the pipes on the south side of the gas station that you and I looked at on the evening of April 24th.

Terry

Box 1. Email from Terry Weiner.

Regards,

Tom Budlong, Intervenor
310-476-1731 Voice
310-471-7531 Fax
TomBudlong@RoadRunner.com

cc: Docket Office, Proof of Service List, Public Advisor, Edie Harmon

Attachments:

May 12 letter
Proof of Service
Declaration of Proof of Service

Wednesday, May 12, 2010

By email and USPS mail.

Jeffery D Byron
Commissioner and Presiding Member
California Energy Commission
1515 Ninth Street, MS-15
Sacramento, CA 95814

Anthony Eggert, Commissioner,
California Energy Commission
1515 Ninth Street, MS-15
Sacramento, CA 95814

Dear Mr. Eggert and Mr. Byron,

Re: Applicant's Supplement, dated May, 2010, to the Imperial Valley Solar AFC (08-AFC-5)
Opening Testimony, May 24 Evidentiary Hearing:

Hearing Officer Renaud has requested response to CURE's May 10, 2010 letter concerning the recent submittal of the Applicant's revised AFC, and potential opening testimony. I concur with the letter's issues.

It would appear the applicant was delayed in sending this previously scheduled revision. Several problems flow from this delay:

- The time allotted to comment on the letter is several days – far too short for careful comment.
- The revision is voluminous - over 1000 pages of figures, moderately dense text and very dense tables.
- Making it less efficient to examine, understand, and work with is lack of effective bookmarks in the PDF document.
- Commonly, staff provides an analysis of applicant submissions. The staff assessment often results in requests for more information from the applicant. It is also a major basis for comment by others. In this instance, staff would presumably be working to the same accelerated schedule resulting from the submission date. No staff assessment has been prepared, and had one been prepared its quality would be suspect given the short time.

Considering this, I concur with CURE's offer to provide testimony following staff analysis, not before. As with CURE, I find it practically impossible to provide testimony in the short time, and so will not provide it before the Evidentiary Hearing (and certainly not by the now passed submission deadline).

I request a new schedule date for submission.

- I suggest 45-60 days after the Evidentiary Hearing, since the hearing could possibly provide new information. More time than the suggested 45-60 days may be warranted.
- The major subjects of the revision – water source, the hydrogen system, the water and transmission lines – are important, as evidenced by previous revisions and now by this latest revision.
- Additional data requests could arise from the revised designs.

Obviously the revision involves difficult design issues. They must not be rushed.

Regards,

Tom Budlong, Intervenor
310-476-1731 Voice
310-471-7531 Fax
TomBudlong@RoadRunner.com

Cc: Docket Office, Proof of Service List, Public Advisor, Edie Harmon

STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

In the Matter of:) 08-AFC-5
)
Imperial Valley Solar, LLC) **DECLARATION OF SERVICE**
)
_____)

I, Tom Budlong, declare that on May 14, 2010 I served and filed copies of the attached **Request Of Intervenor Tom Budlong For Additional Time To Respond To Supplemental Applicant Submission**, accompanied by a copy of the most recent *Proof of Service* list (most recent version is located on the proceeding's web page) with the Docket Unit OR with the presiding committee member of the proceeding. The document has been sent to the Commission AND the applicant, as well as the other parties in this proceeding (as shown on the *Proof of Service* list), in the following manner:

(Check all that Apply)

FOR SERVICE TO THE APPLICANT AND 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 Los Angeles, CA 90049 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-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

-or-

CALIFORNIA ENERGY COMMISSION
Presiding Member _____
1516 Ninth Street
Sacramento, CA 95814-5512
Re: Docket No. [08-AFC-5]

docket@energy.state.ca.us

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

/s/ Tom Budlong. Mailed copy has original signature.
Name

May 14, 2010
Date



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

**APPLICATION FOR CERTIFICATION FOR THE
IMPERIAL VALLEY SOLAR PROJECT**
(formerly known as SES Solar Two Project)
IMPERIAL VALLEY SOLAR, LLC

Docket No. 08-AFC-5
PROOF OF SERVICE
(Revised 5/10/10)

APPLICANT

Richard Knox
Project Manager
SES Solar Two, LLC
4800 N Scottsdale Road.,
Suite 5500
Scottsdale, AZ 85251
richard.knox@tesseractosolar.com

CONSULTANT

Angela Leiba, Sr. Project
Manager URS Corporation
1615 Murray Canyon Rd.,
Suite 1000
San Diego, CA 92108
Angela_Leiba@urscorp.com

APPLICANT'S COUNSEL

Allan J. Thompson
Attorney at Law
21 C Orinda Way #314
Orinda, CA 94563
allanori@comcast.net

Ella Foley Gannon, Partner
Bingham McCutchen, LLP
Three Embarcadero Center
San Francisco, CA 94111
ella.gannon@bingham.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

Daniel Steward, Project Lead
BLM – El Centro Office
1661 S. 4th Street
El Centro, CA 92243
daniel_steward@ca.blm.gov

Jim Stobaugh,
Project Manager &
National Project Manager
Bureau of Land Management
BLM Nevada State Office
P.O. Box 12000
Reno, NV 89520-0006
jim_stobaugh@blm.gov

INTERVENORS

California Unions for Reliable
Energy (CURE)
c/o Tanya A. Gulesserian
Loulena Miles, Marc D. Joseph
Adams Broadwell Joseph &
Cardozo
601 Gateway Blvd., Ste. 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com
lmiles@adamsbroadwell.com

Tom Budlong
3216 Mandeville Canyon Road
Los Angeles, CA 90049-1016
TomBudlong@RoadRunner.com

Hossein Alimamaghani
4716 White Oak Place
Encino, CA 91316
almamaghani@aol.com

*California Native Plant Society
Tom Beltran
P.O. Box 501671
San Diego, CA 92150
cnpsdd@nyms.net

California Native Plant Society
Greg Suba & Tara Hansen
2707 K Street, Suite 1
Sacramento, CA 5816-5113
gsuba@cnps.org

ENERGY COMMISSION

JEFFREY D. BYRON
Commissioner and Presiding
Member
jbyron@energy.state.ca.us

ANTHONY EGGERT
Commissioner and Associate
Member
aeggert@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Kristy Chew,
Adviser to Commissioner Byron
e-mail service preferred
kchew@energy.state.ca.us

Caryn Holmes, Staff Counsel
Christine Hammond,
Co-Staff Counsel
cholmes@energy.state.ca.us
chammond@energy.state.ca.us

Christopher Meyer
Project Manager
cmeyer@energy.state.ca.us

Jennifer Jennings
Public Adviser
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, _____, declare that on _____, I served and filed copies of the attached, _____ . The original documents, filed with the Docket Unit, are 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/solartwo/index.html>]

The documents have 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;
- _____ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date 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-5
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

*indicates change