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April 24, 2013

Christine Stora
Compliance Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814-5512

California Energy Commission DOCKETED 09-AFC-7C
TN # 70448 APR. 24 2013

**Subject: PALEN SOLAR HOLDINGS, LLC'S SUPPLEMENT NO. 3
PALEN SOLAR HOLDINGS, LLC'S PETITION FOR AMENDMENT
PALEN SOLAR ELECTRIC GENERATING SYSTEM
DOCKET NO. (09-AFC-7C)**

Dear Ms. Stora,

Enclosed for filing with the California Energy Commission is the electronic version of **PALEN SOLAR HOLDINGS, LLC'S SUPPLEMENT NO. 3** in support of the Petition for Amendment for Palen Solar Electric Generating System.

Sincerely,

Scott A. Galati
Counsel to Palen Solar Holdings, LLC

Land Use Efficiency Calculations

The Revised Staff Assessment for the Approved Project included calculations of land use efficiency for the generation of electricity for the Approved Project and several other technologies. Specifically, Staff outlined its method for calculating Power-based efficiency and Energy-base efficiency for the Approved Project at Page D.3-5:

Staff calculates power-based land use efficiency thus:

Power-based efficiency: $500 \text{ MW} \div 2,970 \text{ acres} = \mathbf{0.17 \text{ MW/acre}}$ or **6.0 acres/MW**

Staff calculates energy-based land use efficiency thus:

Energy-based efficiency: $1,000,000 \text{ MWh/year} \div 2,970 \text{ acres} = \mathbf{337 \text{ MWh/acre-year}}$

The Modified Project will require 1,644 acres for unit 1; 1,883 acres for Unit 2 and 48 acres of common facilities for a total of 3,575 acres. The Modified Project is expected to produce 1,400,000 MWh/year or electricity. Using this same method for the Modified Project would yield the following results:

Power-based efficiency: $500 \text{ MW} \div 3,575 \text{ acres} = \mathbf{0.14 \text{ MW/acre}}$ or **7.2 acres/MW**

Staff calculates energy-based land use efficiency thus:

Energy-based efficiency: $1,360,000 \text{ MWh/year} \div 3,575 \text{ acres} = \mathbf{380 \text{ MWh/acre-year}}$

While at first glance it appears that the Original Project uses the land more efficiently for power generation, Staff's use of 2,970 acres for power generation for the parabolic trough considered only the footprint of the parabolic troughs themselves as the outer boundary. The 2,970 acre estimate did not consider the massive grading outside the boundaries of the actual footprint that would have been necessary to actually construct the Original Project and manage the drainage around and through the site. Since that direct grading was necessary to maintain a level site so that parabolic trough's could be employed, it would be more appropriate to include the additional disturbance area as necessary to generate electricity. Therefore the total disturbance area where grading would take place in order to construct the Original Project would be 3,896 acres.

Using this disturbance area would yield the following corrected values for the Original Project:

Power-based efficiency: $500 \text{ MW} \div 3,896 \text{ acres} = \mathbf{0.13 \text{ MW/acre}}$ or **7.8 acres/MW**

Staff calculates energy-based land use efficiency thus:

Energy-based efficiency: $1,000,000 \text{ MWh/year} \div 3,896 \text{ acres} = \mathbf{257 \text{ MWh/acre-year}}$

Therefore, the Modified Project uses land more efficiently than the Approved Project.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
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**AMENDMENT
FOR THE PALEN SOLAR ELECTRIC
GENERATING SYSTEM**

**Docket No. 09-AFC-7C
PROOF OF SERVICE
(Revised 4/24/2013)**

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*Indicates change

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*After docketing, the Docket Unit
will provide a copy to the persons
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DECLARATION OF SERVICE

I, Marie Fleming, declare that on April 24, 2013, I served and filed copies of the attached, **PALEN SOLAR HOLDINGS, LLC'S SUPPLEMENT NO. 3** dated April 24, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at: <http://www.energy.ca.gov/sitingcases/palen/compliance/>.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service) and to the Commission's Docket Unit, as appropriate, in the following manner:

(Check one)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

 X I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those parties noted above as "hard copy required"; **OR**

 Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: April 24, 2013



Marie Fleming