

DOCKETED

Docket Number:	09-AFC-07C
Project Title:	Palen Solar Power Project - Compliance
TN #:	202483
Document Title:	Ex.1135 - Biological Resources Supplemental Opening Testimony of Andrea Grenier â€œ Avian Mortality Data
Description:	N/A
Filer:	Marie Fleming
Organization:	Galati Blek LLP
Submitter Role:	Applicant Representative
Submission Date:	6/23/2014 1:56:54 PM
Docketed Date:	6/23/2014

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

Petition For Amendment for the
**PALEN SOLAR ELECTRIC
GENERATING SYSTEM**

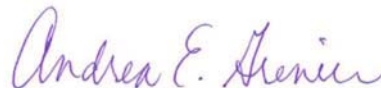
DOCKET NO. 09-AFC-07C

**DECLARATION OF ANDREA
GRENIER**

I, Andrea Grenier, declare as follows:

1. I am presently the owner of Grenier & Associates, Inc.
2. A copy of my professional qualifications and experience was included with my Opening Testimony and is incorporated by reference in this Declaration.
3. I prepared the attached testimony relating to Biological Resources for the Petition for Amendment for the Palen Solar Electric Generating System (California Energy Commission Docket Number 09-AFC-07C).
4. It is my professional opinion that the attached prepared testimony is valid and accurate with respect to issues that it addresses.
5. I am personally familiar with the facts and conclusions related in the attached prepared testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on June 17, 2014.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
BIOLOGICAL RESOURCES
SUPPLEMENTAL OPENING TESTIMONY
AVIAN MORTALITY DATA**

I. Name: Andrea Grenier

II. Purpose:

My supplemental testimony addresses the potential impacts for Biological Resources – Avian, associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

Andrea Grenier: I am presently the owner of Grenier and Associates, Inc. and have been a principal with the firm since 1997. I have a Degree in Business Administration and have over 20 years of experience in providing environmental permitting and consulting support for the permitting of over a dozen power plant projects subject to the California Energy Commission's licensing and certification regulatory process. I have also managed and implemented compliance management programs for several CEC-licensed power plant projects, including but not limited to the Donald Von Raesfeld Power Plant, Roseville Energy Park, Colusa Generating Station, Gateway Generating Station, Walnut Creek Energy Park, Lodi Energy Center, Blythe Solar Energy Project, and Rice Solar Energy Project. I prepared the Avian Mortality Comparison Table, Exhibit 1133 in accordance with the direction provided by the Committee at the January 7, 2014 PMPD Conference and compiled the table comparing labor hours and avian mortality reported for the Genesis Solar Energy Project, Exhibit 1138. A detailed description of my qualifications has been previously provided in Attachment A to PSH's Opening Testimony package.

To the best of my knowledge all referenced documents and all of the facts contained in this testimony are true and correct. To the extent this testimony contains opinions, such opinions are my own. I make these statements and provide these opinions freely and under oath for the purpose of constituting sworn testimony in this proceeding.

IV. Opinion and Conclusions:

The Committee provided direction at the PMPD Conference that it would like the PSEGS evidentiary record to provide a comparison of avian impacts with other solar technologies. To provide a rough comparison I compiled Exhibit 1133 which provides a summary of publicly available

avian mortality data reported by First Solar for its Desert Sunlight Project (DSP) photovoltaic (PV) facility, NextEra for its Genesis Solar Energy Project (GSEP) solar trough facility; and the Ivanpah Solar Electric Generating Station (ISEGS) solar power tower facility. I used the following publically available resources to prepare Exhibit 1133:

- DSP: Weekly, quarterly, and annual biological resources reports from 2012, 2013 and 2014, available on First Solar's website, as well as Salvage Permit (SPUT) data reported to the California Department of Fish & Wildlife by First Solar.
- GSEP: Monthly Compliance Reports (MCRs) submitted to the CEC in 2012, 2013, and 2014 and available on the CEC's website.
- ISEGS: Monthly Compliance Reports (MCRs) submitted to the CEC in 2012, 2013, and 2014 and available on the CEC's website.

In preparing Exhibit 1133, I reviewed the data contained in the above-referenced documents and prepared an excel spreadsheet to show the 2012, 2013, and 2014 avian mortality information in as concise a format as possible. The "rollup sheet" shows the monthly and yearly totals for all three projects, followed by project-specific sheets that list each mortality, including the species' name and the use of a color coding system to show the project feature where the mortality occurred, if known. In instances where the cause of mortality was reported as being related to solar flux, those mortalities were also color coded. The data is presented as "raw" without any effort to analyze the data reported by the Project Owners. The comparison chart provided in Exhibit 1133 was prepared solely to show the Committee in summary form information regarding avian mortalities from three ongoing projects using different solar technologies. Please see Exhibit 1134, the Supplemental Testimony of Dr. Ken Levenstein and Wally P. Erickson for an analysis of the data.

Exhibit 1138 compares the labor hours and avian mortality reported by month for the GSEP and was also prepared using data from the GSEP MCRs.