

DOCKETED

Docket Number:	09-AFC-07C
Project Title:	Palen Solar Power Project - Compliance
TN #:	200667
Document Title:	PSH's Opening Testimony- Batch 1
Description:	N/A
Filer:	Marie Fleming
Organization:	Galati Blek LLP
Submitter Role:	Applicant's Representative
Submission Date:	9/30/2013 4:34:51 PM
Docketed Date:	9/30/2013

September 30, 2013

California Energy Commission
Dockets Unit
1516 Ninth Street
Sacramento, CA 95814-5512

**Subject: PALEN SOLAR HOLDINGS, LLC'S OPENING TESTIMONY- BATCH 1
PALEN SOLAR ELECTRIC GENERATING SYSTEM
DOCKET NO. (09-AFC-7C)**

Enclosed for filing with the California Energy Commission is the electronic version of **PALEN SOLAR HOLDINGS, LLC'S OPENING TESTIMONY- BATCH 1**, for Palen Solar Electric Generating System (09-AFC-7C).

Sincerely,



Marie Fleming

Palen Solar Holdings, LLC's Opening Testimony- Batch 1

Palen Solar Electric Generating System (09-AFC-7C)

September 30, 2013

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

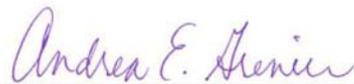
DOCKET NO. 09-AFC-07C

**DECLARATION OF ANDREA
GRENIER**

I, Andrea Grenier, declare as follows:

1. I am presently the owner of Grenier and 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 Hazardous Materials 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
HAZARDOUS MATERIALS
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Hazardous Materials associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Hazardous Materials section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Hazardous Materials Section , dated December 2012, and docketed on December 17, 2012.
21	70785	PSH's Response to Workshop Queries. Response 2-5 , dated May 2013, and docketed on May 13, 2013.
29	70970	Response to Staff's Email Request Regarding Hazardous Materials , dated May 28, 2013, and docketed on May 28, 2013.
41	71551	PSH's Initial Comments on the Preliminary Staff Assessment, Hazardous Materials , dated July 11, 2013, docketed on July 11, 2013.
57	200077	PSH's Final Comments on the Preliminary Staff Assessment, Hazardous Materials , dated July 29, 2013, docketed on July 29, 2013.

V. Opinion and Conclusions:

I have reviewed the Hazardous Materials section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree that with incorporation of the Proposed Conditions of Certification, the PSEGS will not result in significant Hazardous Materials impacts and will comply with all applicable Hazardous Materials-related laws, ordinances, regulations and standards (LORS).

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 and 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 Land Use 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
LAND USE
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Land Use associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Land Use section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Land Use Section , dated December 2012, and docketed on December 17, 2012.

V. Opinion and Conclusions:

I have reviewed the Land Use section contained in Part A of the Final Staff Assessment and I agree with the Condition of Certification proposed therein and the Findings and Conclusions that the PSEGS may be an incompatible land use solely related to unmitigatable significant visual resources impacts. I further agree that with incorporation of the Proposed Condition of Certification, the PSEGS will comply with all applicable Land Use-related laws, ordinances, regulations and standards (LORS).

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 and 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 Noise and Vibration 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
NOISE
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Noise and Vibration associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Noise and Vibration section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Noise and Vibration Section, dated December 2012, and docketed on December 17, 2012.

V. Opinion and Conclusions:

I have reviewed the Noise and Vibration section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree that with incorporation of the Proposed Conditions of Certification, the PSEGS will not result in significant Noise and Vibration impacts and will comply with all applicable Noise-related laws, ordinances, regulations and standards (LORS).

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 and 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 Socioeconomic 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
SOCIOECONOMIC RESOURCES
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Socioeconomic Resources associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Socioeconomic Resources section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Socioeconomic Resources Section , dated December 2012, and docketed on December 17, 2012.
21	70785	PSH's Response to Workshop Queries. Response 2-1 , dated May 2013, and docketed on May 13, 2013.
26	70896	PSH's Response to CEC Staff Data Request Set 2 (19-39) Responses 33 and 34 , dated May 2013, and docketed on May 20, 2013.
46	71695	Supplemental Socioeconomic Information Requested By Staff in PSA , dated July 22, 2013, docketed on July 22, 2013.
52	200036-200037	PSH's Advance Response to Data Request 82 , dated July 24, 2013, docketed on July 24, 2013.
60	200098	PSH's Response to Data Request Set 4 (73-89) Responses 82 and 83 , dated July 2013, and docketed on July 31, 2013.

V. Opinion and Conclusions:

I have reviewed the Socioeconomic Resources section contained in Part A of the Final Staff Assessment and I agree with the additional Condition of Certification proposed therein. I further agree that with incorporation of the Proposed Condition of Certification, the PSEGS will not result in

significant Socioeconomic Resources impacts and will comply with all applicable laws, ordinances, regulations and standards (LORS).

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

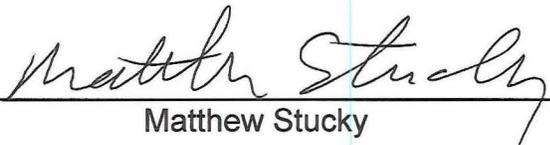
DOCKET NO. 09-AFC-07C

**DECLARATION OF MATTHEW
STUCKY**

I, Matthew Stucky, declare as follows:

1. I am presently employed by Abengoa Solar LLC as Manager of Business Development.
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 Soil and Water 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 September 26, 2013.


Matthew Stucky

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

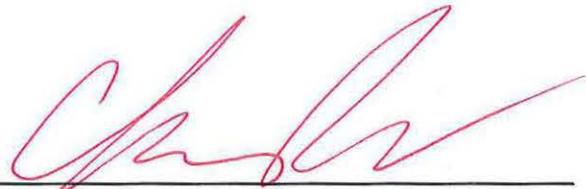
DOCKET NO. 09-AFC-07C

**DECLARATION OF CHARLES
TURLINSKI**

I, Charles Turlinski, declare as follows:

1. I am presently employed by BrightSource Energy, Inc. as Senior Director Project of Development.
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 Soil and Water 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 9/27 2013.



Charles Turlinski

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
SOIL AND WATER RESOURCES
OPENING TESTIMONY**

I. Name:

Matthew Stucky and Charles Turlinski

II. Purpose:

Our testimony addresses the subject of Soil and Water Resources associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

Matthew Stucky: I am presently Manager of Business Development at Abengoa Solar LLC and have been for the past three years. I have degrees in Civil Engineering and Environmental Studies and a graduate degree in Environmental Engineering. My experience includes managing permitting and compliance activities for the California Energy Commission-licensed Mojave Solar Project. I prepared, caused to be prepared, or reviewed the Soil and Water Resources section of the Petition For Amendment, as well as the post-filing information, data responses, and supplemental filings.

Charles Turlinski: I am currently employed by BrightSource Energy Inc. and I am a developer of utility scale renewable energy projects with 10 years' experience. I have managed the development and interconnection processes for wind and solar projects throughout the country, including the negotiation and execution of Large Generator Interconnection Agreements (LGIAs) for over 1000 megawatts of capacity in the CAISO. I have a MBA from the Massachusetts Institute of Technology (MIT). I prepared, caused to be prepared, or reviewed the Soil and Water Resources section of the Petition For Amendment, as well as the post-filing information, data responses, and supplemental filings.

Detailed descriptions of our qualifications are presented in the resumes which are included in Attachment A to this Opening Testimony package.

To the best of our 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 our own. We make these statements and provide these opinions freely and under oath for the purpose of constituting sworn testimony in this proceeding.

IV. Exhibits

In addition to this written testimony, we are sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Soil and Water Resources Section , dated December 2012, and docketed on December 17, 2012.
5	69601	PSH's Response to Staff's Issue Identification Report , dated February 19, 2013, and docketed on February 19, 2013.
9	70015	Preliminary Draft Construction Drainage, Erosion and Sedimentation Control Plan / Stormwater Pollution Prevention Plan , dated March 2013, and docketed on March 21, 2013.
10	70096	PSH's Response to CEC Data Request Set 1 (1-18), Responses 6 through 8 , dated March 2013, and docketed on March 25, 2013.
11	70152	Preliminary Draft Construction Drainage, Erosion and Sedimentation Control Plan/ Stormwater Pollution Prevention Plan Supplement - Appendix A , dated March 2013, and docketed March 27, 2013.
21	70785	PSH's Response to Workshop Queries, Response 1-15 , dated May 2013, and docketed on May 13, 2013.

39	71244	Revised Table 2.4-1 Average Daily Water Requirements (Both Solar Plants) for PSH's Petition to Amend , dated June 13, 2013, and docketed on June 13, 2013.
41	71551	PSH's Initial Comments on the Preliminary Staff Assessment, Soil and Water Resources , dated July 11, 2013, docketed on July 11, 2013.
53	200040	PSH's Wastewater Discharge Requirements , dated July 25, 2013, docketed July 25, 2013
57	200077	PSH's Final Comments on the Preliminary Staff Assessment, Soil and Water Resources , dated July 29, 2013, docketed on July 29, 2013.

V. Opinion and Conclusions

We have reviewed the Soil and Water Resources section contained in Part A of the Final Staff Assessment (FSA) and we agree with all of the Conditions of Certification proposed therein except we request clarifying language to Item C.3 of Condition of Certification **SOIL&WATER-1**, as described below. We further agree that with incorporation of the Proposed Conditions of Certification, as modified below, the Project will not result in significant Soil and Water Resource impacts and will comply with all applicable Soil and Water Resource-related laws, ordinances, regulations and standards (LORS).

PROPOSED CONDITION OF CERTIFICATION SOIL&WATER-1

In the Soil and Water Resources section of Part A of the FSA, Staff added Item C.3. to Proposed Condition of Certification **SOIL&WATER-1** to address potential impacts associated with construction-related flooding. This item also specifically addresses temporary diversion channels. At this time, since the final grading design and sequencing have not been completed, there is the potential that during construction there will be no need for temporary diversions channels. To clarify that the PSEGS is not required to install temporary diversion channels where none are needed,

we have proposed the following minor modification shown in **bold and underline**:

- 3c. Earthwork and temporary construction related activities shall be conducted such that off-site resources are protected from impacts due to redirection of flood flows around and through the site. Construction activities shall proceed in a manner so as to minimize exposure of facilities to construction period flooding. Temporary diversion channels, **if employed**, shall be adequately designed for flood conveyance capable of protecting the construction site while not contributing to onsite or offsite erosion.

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

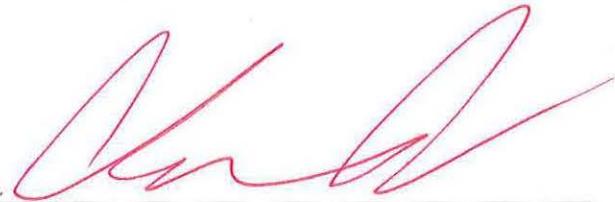
DOCKET NO. 09-AFC-07C

**DECLARATION OF CHARLES
TURLINSKI**

I, Charles Turlinski, declare as follows:

1. I am presently employed by BrightSource Energy, Inc. as Senior Director Project of Development.
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 Transmission Line Safety and Nuisance 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 9/22 2013.



Charles Turlinski

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
TRANSMISSION LINE SAFETY AND NUISANCE
OPENING TESTIMONY**

I. Name:

Charles Turlinski

II. Purpose:

My testimony addresses the subject of Transmission Line Safety and Nuisance associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

I am currently employed by BrightSource Energy Inc. and I am a developer of utility scale renewable energy projects with 10 years' experience. I have managed the development and interconnection processes for wind and solar projects throughout the country, including the negotiation and execution of Large Generator Interconnection Agreements (LGIAs) for over 1000 megawatts of capacity in the CAISO. I have a MBA from the Massachusetts Institute of Technology (MIT). I prepared, caused to be prepared, or reviewed the Transmission Line Safety and Nuisance section of the Petition For Amendment, as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume which is included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Transmission Line Safety and Nuisance Section , dated December 2012, and docketed on December 17, 2012.

V. Opinion and Conclusions:

I have reviewed the Transmission Line Safety and Nuisance section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree with incorporation of the Proposed Conditions of Certification that the PSEGS will comply with all applicable Transmission Line Safety and Nuisance-related laws, ordinances, regulations and standards (LORS).

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 and 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 Visual 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
VISUAL RESOURCES
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Visual Resources associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Visual Resources section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Visual Resources Section , dated December 2012, and docketed on December 17, 2012.

5	69601	PSH's Response to Staff's Issue Identification Report , dated February 19, 2013, and docketed on February 19, 2013.
12	70179	PSH's Status Report 1 , dated March 29, 2013 and docketed on March 29, 2013.
15	70251	PSEGS Tower Viewshed Delineation - Potential Sensitive Receptors , dated April 8, 2013, and docketed on April 8, 2013.
16	70343	PSEGS Revised Tower Delineation - Potential Sensitive Receptors , dated April 16, 2013, and docketed on April 16, 2013.
19	70670	PSH's Status Report 2 , dated May 8, 2013, and docketed on May 8, 2013.
20	70763	PSH's Oblique View of PSEGS , dated May 10, 2013, and docketed on May 10, 2013.
21	70785	PSH's Response to Workshop Queries, Responses 1-14, 2-6 and 3-7 , dated May 2013, and docketed on May 13, 2013.

25	70861	PSH's Tower Viewshed Delineation—Minus Condensers , dated May 16, 2013, and docketed on May 16, 2013.
26	70896	PSH's Response to CEC Staff Data Request Set 2 (19-39) Responses 35-39 , dated May 2013, and docketed on May 20, 2013.
33	71087	Joshua Tree National Park Visual Resources Analysis Report , dated May 31, 2013, and docketed on May 31, 2013.
34	71098	PSEGS Visual Resources Analysis Report , dated May 2013 and docketed on May 31, 2013.

V. Opinion and Conclusions:

I have reviewed the Visual Resources section contained in Part A of the Final Staff Assessment (FSA) and I agree with all of the Conditions of Certification proposed therein except I request clarifying language to Item G. of Condition of Certification **VIS-3**, described below. I agree that even with the Conditions of Certification, the PSEGS will result in significant Visual Resources impacts. I further agree with Staff that since the PSEGS is completely on federal land owned and managed by the Bureau of Land Management (BLM), the Riverside County General Plan goals and objectives are not applicable. Because the Riverside County General Plan goals and objectives are not applicable to federal land, they are not “applicable laws, ordinances, regulations or standards” (LORS). I do agree with the FSA conclusion that the PSEGS will comply with all applicable Visual Resources LORS.

PROPOSED CONDITION OF CERTIFICATION VIS-3

In the Visual Resources section of Part A of the FSA, Staff added Item G to address the potential for reflection of the heliostats to reflect project lighting when the heliostats are in the horizontal stow position. I agree with this addition, provided that (1) it is inapplicable to the FAA required

lighting and emergency lighting, and (2) if there is a reasonable standard applied for compliance. Therefore, I have proposed the following modifications shown in **bold and underline**:

- G. Lighting plan shall demonstrate that plant operational lighting **(excluding FAA and emergency lighting)** will, **to the extent practical**, not be **directly** reflected upward or off-site by heliostats in nighttime stow position. Control measures for eliminating such reflections shall be incorporated in the HMPP specified in Condition of Certification TRANS-7.

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 and 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 Waste Management 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
WASTE MANAGEMENT
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subject of Waste Management associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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 prepared, caused to be prepared, or reviewed the Waste Management section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Waste Management Section, dated December 2012, and docketed on December 17, 2012.
40	71280	PSH's Response to CEC Staff Data Request Set 3 (40-72) Responses 70-72, dated June 2013, docketed on June 14, 2013

V. Opinion and Conclusions:

I have reviewed the Waste Management section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree that with incorporation of the Proposed Conditions of Certification, the PSEGS will not result in significant Waste Management impacts and will comply with all applicable Waste Management-related laws, ordinances, regulations and standards (LORS).

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 CHANNING
HASKELL**

I, Channing Haskell, declare as follows:

1. I am presently employed by CH2M Hill as a Project Engineer.
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 Facility Design 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 30 September 2013.


Channing Haskell

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
FACILITY DESIGN
OPENING TESTIMONY**

I. Name:

Channing Haskell

II. Purpose:

My testimony addresses the subject of Facility Design associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

I am presently a Project Engineer with CH2M Hill and have been for the past eight years. I have a Degree in electrical engineering and I have over 33 years of experience in engineering, design and construction of power plants. I prepared, supervised, caused to be prepared, or reviewed the Facility Design section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume, which is included in Attachment A to this 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. Exhibits

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Facility Design Section , dated December 2012, and docketed on December 17, 2012.

V. Opinion and Conclusions

I have reviewed the Facility Design section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree that with incorporation of the Proposed Conditions of Certification, the PSEGS will not result in significant engineering or Facility Design impacts and will comply with all applicable engineering-related laws, ordinances, regulations and standards (LORS).

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 CHANNING
HASKELL**

I, Channing Haskell, declare as follows:

1. I am presently employed by CH2M Hill as a Project Engineer.
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 Efficiency 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 30 September 2013.


Channing Haskell

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
EFFICIENCY
OPENING TESTIMONY**

I. Name:

Channing Haskell

II. Purpose:

My testimony addresses the subject of Efficiency associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

I am presently a Project Engineer with CH2M Hill and have been for the past eight years. I have a Degree in electrical engineering and I have over 33 years of experience in engineering, design and construction of power plants. I prepared, supervised, caused to be prepared, or reviewed the Efficiency section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume, which is included in Attachment A to this 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. Exhibits

In addition to this written testimony, I am sponsoring the following exhibit in this proceeding.

Exhibit No.	Transaction No.	Document Title
17	70448	PSH's Supplement No.3 , dated April 24, 2013, and docketed on April 24, 2013.

V. Opinion and Conclusions

I have reviewed the Efficiency section contained in Part A of the Final Staff Assessment and I agree with the conclusion that the PSEGS will produce clean renewable electricity in an efficient manner.

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 CHANNING
HASKELL**

I, Channing Haskell, declare as follows:

1. I am presently employed by CH2M Hill as a Project Engineer.
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 Reliability 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 30 September 2013.


Channing Haskell

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
RELIABILITY
OPENING TESTIMONY**

I. Name:

Channing Haskell

II. Purpose:

My testimony addresses the subject of Reliability associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

I am presently a Project Engineer with CH2M Hill and have been for the past eight years. I have a Degree in electrical engineering and I have over 33 years of experience in engineering, design and construction of power plants. I prepared, supervised, caused to be prepared, or reviewed the Facility Design section of the Petition For Amendment as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume, which is included in Attachment A to this 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. Exhibits

In addition to this written testimony, I am sponsoring the following exhibit in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Reliability Section , dated December 2012, and docketed on December 17, 2012.

V. Opinion and Conclusions

I have reviewed the Reliability section contained in Part A of the Final Staff Assessment and I agree with the conclusion that the PSEGS will produce clean renewable electricity in a reliable manner.

STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

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

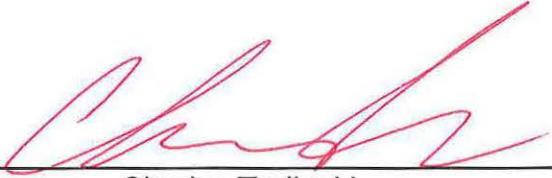
DOCKET NO. 09-AFC-07C

**DECLARATION OF CHARLES
TURLINSKI**

I, Charles Turlinski, declare as follows:

1. I am presently employed by BrightSource Energy, Inc. as Senior Director Project of Development.
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 Transmission System Engineering 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 9/21 2013.



Charles Turlinski

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
TRANSMISSION SYSTEM ENGINEERING
OPENING TESTIMONY**

I. Name:

Charles Turlinski

II. Purpose:

My testimony addresses the subject of Transmission System Engineering associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

I am currently employed by BrightSource Energy Inc. and I am a developer of utility scale renewable energy projects with 10 years' experience. I have managed the development and interconnection processes for wind and solar projects throughout the country, including the negotiation and execution of Large Generator Interconnection Agreements (LGIAs) for over 1000 megawatts of capacity in the CAISO. I have a MBA from the Massachusetts Institute of Technology (MIT). I prepared, caused to be prepared, or reviewed the Transmission System Engineering section of the Petition For Amendment, as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume which is included in Attachment A to this 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. Exhibits

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
3	68910	PSH's Petition for Amendment, Transmission System Engineering Section , dated December 2012, and docketed on December 17, 2012.
10	70096	PSH's Response to CEC Data Request Set 1 (1-18), Response 18 , dated March 2013, and docketed on March 25, 2013.
21	70785	PSH's Response to Workshop Queries, Responses 1-1 through 1-4 , dated May 2013, and docketed on May 13, 2013.
31	70980	Additional Transmission System Engineering Information Related to SCE's Red Bluff Substation , dated May 28, 2013, and docketed on May 28, 2013.

V. Opinion and Conclusions

I have reviewed the Transmission System Engineering section contained in Part A of the Final Staff Assessment and I agree with the Conditions of Certification proposed therein. I further agree that with incorporation of the Proposed Conditions of Certification, the PSEGS will not result in significant impacts to the transmission system and will comply with all applicable Transmission System Engineering-related laws, ordinances, regulations and standards (LORS).

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 and 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 General Conditions, Closure and Compliance 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 September 26, 2013.



Andrea Grenier

**PALEN SOLAR ELECTRIC GENERATING SYSTEM
GENERAL CONDITIONS, CLOSURE AND COMPLIANCE
OPENING TESTIMONY**

I. Name:

Andrea Grenier

II. Purpose:

My testimony addresses the subjects of General Conditions, Closure and Compliance associated with the construction and operation of the Palen Solar Electric Generating System (PSEGS) (09-AFC-7C).

III. Qualifications:

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, and Rice Solar Energy Project. I prepared, caused to be prepared, or reviewed the General Conditions, Closure and Compliance section of the Petition For Amendment, as well as the post-filing information, data responses, and supplemental filings. A detailed description of my qualifications is presented in my resume included in Attachment A to this 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. Exhibits:

In addition to this written testimony, I am sponsoring the following exhibits in this proceeding.

Exhibit No.	Transaction No.	Document Title
41	71551	PSH's Initial Comments on the Preliminary Staff Assessment , dated July 11, 2013, docketed on July 11, 2013.
57	200077	PSH's Final Comments on the Preliminary Staff Assessment , dated July 29, 2013, docketed on July 29, 2013.

V. Opinion and Conclusions:

I have reviewed the Compliance Conditions and Compliance Monitoring Plan section contained in Part A of the Final Staff Assessment (FSA). Staff has significantly rewritten this section even though the modifications are unrelated to the Petition to Amend the Original Project to allow the PSEGS. Notwithstanding this general objection, I agree with the majority of the modifications. However, I do not agree with Staff's expansion of the CBO role and the new definitions of Site Assessment and Pre-Construction activities.

Expansion of Role of Delegate CBO: Staff has added language to the FSA that has the potential to expand the role of the delegate CBO to facilitate compliance of environmental-related Conditions of Certification. The current conditions of certification already require that the Project Owner have a Designated Biology, Cultural Resource Specialist, and Air Quality Construction Mitigation Manager on site during construction, all of whom have duties that include direct reporting to the CEC. While I do not object to this concept in general and in fact welcome "additional eyes" on the ground to ensure construction compliance obligations are achieved, I recommend the language proposed by Staff be modified to clarify that the delegate CBO can carry out this role as part of its already-required field inspection duties as set forth in Condition of Certification GEN-8 and/or Worker-Safety-4 (and would therefore not result in a potential duplication of inspection roles as well as fees). In addition, the language should be clarified to indicate that the CBO's role would not be expanded to duplicate the role of Staff with respect to review and approval of environmental compliance and mitigation plans. To that end, I recommend that the

following modifications (insertions shown in **bold and underline**; deletions shown in ~~strikethrough~~) be made to the FSA language provided by Staff:

Under the California Building Code Standards, while monitoring project construction and operation, staff acts as, and has the authority of, the Chief Building Official (CBO). Staff may delegate CBO responsibility to either an independent third-party contractor or a local building official. However, staff retains CBO authority when selecting a delegate CBO, including the interpretation and enforcement of state and local codes, and the use of discretion, as necessary, in implementing the various codes and standards. The delegate CBO will also be responsible to facilitate compliance with all environmental Conditions of Certification, ~~including Cultural Resources~~, and the implementation of all appropriate codes and standards and Energy Commission requirements. **The CBO's role would not be expanded to nor duplicate the inspection roles of the on-site Designed Biologist, Cultural Resource Specialist, or Air Quality Construction Mitigation Manager provide by the Project Owner, nor duplicate Staff's role with respect to review and approval of environmental compliance and mitigation plans but would allow The the CBO shall to** conduct on-site (including linear facilities) reviews and inspections at intervals necessary to fulfill those responsibilities **as part of its ongoing construction-related field inspections required by Condition of Certification GEN-8 and Worker-Safety-4.** The project owner will pay a delegate CBO fees necessary to cover the costs of these reviews and inspections.

Key Project Definitions: In its final comments on the PSA, PSH requested that the definitions under Site Assessment and Pre-Construction Activities be modified to include specific reference to desert tortoise fencing installation. Although Staff agreed to this request during the July 17, 2013 PSA Workshop, the change was not made in the FSA. Therefore, PHS renews its request that Item 3 be modified as shown below to allow the installation of tortoise fencing as the necessary precursor to conducting the pre-construction desert tortoise surveys required by BIO-9. This modification is necessary to allow desert tortoise fencing and clearance to commence prior to mobilization of the contractor to the site.

Site Assessment and Pre-Construction Activities

The below-listed site assessment and pre-construction activities may be initiated or completed prior to the start of construction, subject to the CPM's approval of the specific site assessment or pre-construction activities.

Site assessment and pre-construction activities include the following, but only to the extent the activities are minimally disruptive to soil and vegetation and will not affect listed or special-status species or other sensitive resources:

1. the installation of environmental monitoring equipment;
2. a minimally invasive soil or geological investigation;
3. a topographical survey;
4. any other study or investigation, such as preconstruction surveys and tortoise **fencing installation and** clearance work **to** determine the environmental acceptability or feasibility of the use of the site for any particular facility; and,
5. any minimally invasive work to provide safe access to the site for any of the purposes specified in 1-4 above.

PSH also renews its request that Item 4 under Site Mobilization and Construction be modified to delete reference to desert tortoise fencing, as this item is a Site Assessment and Pre-Construction activity as discussed in my testimony above. The following modifications to Item 3 should be made to page 7-3 of the FSA:

Site Mobilization and Construction

When a condition of certification requires the project owner to take an action or obtain CPM approval prior to the start of construction, or within a period of time relative to the start of construction, that action must be taken, or approval must be obtained, prior to any site mobilization or construction activities, as defined below.

Site mobilization and construction activities are those necessary to provide site access for construction mobilization and facility installation, including both temporary and permanent equipment and structures, as determined by the CPM.

Site mobilization and construction activities include, but are not limited to:

1. ground disturbance activities like grading, boring, trenching, leveling, mechanical clearing, mowing, grubbing, and scraping;
2. site preparation activities, such as access roads, temporary fencing, trailer and utility installation, construction equipment installation and storage, equipment and supply laydown areas, borrow and fill sites, temporary parking facilities, and chemical spraying and controlled burns; and,
3. permanent installation activities for all facility and linear structures, including access roads, fencing **(including tortoise fencing)**, utilities, parking facilities, equipment storage, mitigation and landscaping activities, and other installations, as applicable.

Attachment A
Resumes

ANDREA GRENIER

Andrea Grenier is a seasoned regulatory strategist and project manager with over 30 years of experience in designing and implementing regulatory and permitting strategies for a variety of clients. For the past 16 years, she has run a successful woman-owned consulting practice and has assisted numerous private and public entities develop, permit, and construct conventional and renewable energy projects in the western United States. Ms. Grenier specializes in preparing California Energy Commission license and permit applications, is adept at managing the preparation of environmental impact documents as required by CEQA and NEPA, and is sought after for her experience in developing and implementing environmental mitigation and compliance programs to ensure that all environmental permit conditions and requirements are met.

Prior to becoming a consultant in 1991, Ms. Grenier worked for nine years as an environmental project manager and regulatory specialist for Southern California Edison. Prior to that, she served as an energy analyst with the California Energy Commission.

PROFESSIONAL HISTORY

Grenier & Associates, Inc.

Owner & President – 1997 to Present

Navigant Consulting (formerly Resource Management International, Inc.)

Director of Environmental Services – 1991 to 1997

Southern California Edison Company

Regulatory and Environmental Affairs Specialist – 1980 to 1989

California Energy Commission

Energy Analyst – 1975 to 1979

EDUCATION

B.S., Business Administration

California State University, San Francisco

PROJECT EXPERIENCE

Palen Solar Holdings LLC – Palen Solar Electric Generating System. 2012 to Present. Ms. Grenier is currently supporting Centerline in its efforts to amend the current CEC license to incorporate a change in technology from parabolic trough to solar power tower.

SolarReserve LLC - Rice Energy Solar Project - 2009 to Present. Ms. Grenier worked closely with the engineering, environmental and legal consultants to prepare and move the Application for Certification through the California Energy Commission licensing process. The project was certified by the CEC 14 months after AFCE was filed. Ms. Grenier coordinated the NEPA permitting process with the two federal co-lead agencies, Western Area Power Administration and the Bureau of Land Management Palm Springs Office to ensure that the required Records of Decision are received in a timely manner. Ms. Grenier is currently managing the pre-construction compliance submittals required by the CEC license.

EME Walnut Creek Energy Center – 2010. Ms. Grenier provided pre-construction compliance management support to Edison Mission Energy and was able to obtain a NTP from the CEC within a 4-month window.

Solar Millennium LLC - Blythe Solar Power Project - 2010 to 2011.

Ms. Grenier provided compliance management services to Solar Millennium to help ensure receipt of both a CEC and BLM Notice to Proceed (NTP) to support the planned construction start date. Responsibilities included reviewing draft compliance plans prepared by the engineering and environmental consultants, preparing a compliance matrix for all 800+ conditions of certification, and assisting in liaison communications with the CEC's compliance project manager.

NCPA Lodi Energy Center - 2008 to Present. Ms. Grenier served as the environmental permitting manager on the Northern California Power Agency's proposed 255 MW Lodi Energy Center Project. The project's AFC was filed in September 2008 and was approved by the CEC in April 2010. The project is now constructed and operating and Ms. Grenier is now serving as NCPA's compliance project manager to ensure that the project is constructed in a manner that complies with all CEC and other regulatory agency permit requirements.

PG&E Colusa Generating Station, 2007 to 2010. Ms. Grenier managed the pre-construction compliance program and offered compliance assistance through the construction phase. The project began commercial operation in 2010.

PG&E Gateway Generating Station, 2006-2008. In 2006, PG&E embarked on a new energy development program, of which the Gateway Generating Station was the first large power plant project to be constructed by PG&E in the last 20 years. Ms. Grenier initially provided due diligence support on the project and then served as PG&E's compliance project manager to ensure that construction of the project complied with all conditions of the CEC's Final Decision as well as other regulatory permits. The project began commercial operation in 2009.

Roseville Electric, Roseville Energy Park, 2003 to 2007. Ms. Grenier served as Roseville Electric's environmental permitting and compliance project manager for the 160 MW Roseville Energy Park project in Roseville, California. Ms. Grenier also worked with RE and the EPC to ensure that construction and commissioning of the project was done in manner that complied with all the conditions in the CEC permit and LORS. The project began commercial operation in 2007.

Silicon Valley Power, Pico Power Project, 2002 to 2005. Ms. Grenier served as the environmental permitting and compliance manager for Silicon Valley Power's 120MW Pico Power Project in Santa Clara. Ms. Grenier reported directly to the General Manager and had lead responsibility for obtaining the CEC license for the project via the CEC's expedited six-month licensing process. Ms. Grenier is proud to have played such an important role in a project that was permitted and constructed in just 3 years.

Channing S Haskell, PE

Engineering Project Manager

Education

Graduate Courses, Business Administration, University of Denver, Denver, Colorado

Graduate Course, Engineering Management, Northeastern University, Boston, Massachusetts

B.S., Electrical Engineering, Northeastern University, Boston, Massachusetts

Professional Credentials

- Registered Professional Engineer – Alaska, Arizona, Colorado, Georgia, Minnesota, Nevada, Ohio and Texas

Distinguishing Qualifications

- 35 years of experience with managing, engineering, designing, constructing, and commissioning of complex industrial projects primarily in the power industry with 30 years in leadership roles.
- Recent experience in Project Management and Project Engineering for engineer-procure-construct (EPC) power projects exceeding \$100 million.
- Power plant project experience includes gas and oil-fired combustion turbines in simple-cycle, combined-cycle, and cogeneration applications; coal-fired plants including both plant and air quality control system design; both PWR and BWR nuclear, geothermal, and hydroelectric.
- Experienced with both engineering-procurement-construction (EPC) and engineering services only project contracting environments.
- Developed standard instrument installation detail drawings, standard bill of material for instrument installation, and instrumentation and controls (I&C) construction specification for power projects.
- Developed standard equipment specifications for distributed control system (DCS) continuous emissions monitoring system (CEMS), and remote terminal unit (RTU) for power projects.
- Power projects engineering experience includes Lead I&C Engineer with additional experience as Lead Electrical Engineer, Resident Engineer, and Estimating Engineer.
- Member of Project Management Institute, International Society of Automation, and Institute of Electrical and Electronic Engineers

Selected Experience

BRIGHTSOURCE INDUSTRIES ISRAEL, PALEN AND HIDDEN HILLS SOLAR ELECTRIC GENERATING FACILITY – Southern, California

Project Manager for the performance of conceptual engineering and design services in support of permitting activities for these 500 MW concentrating solar power plants. Managed development of technical information including project description, power block general arrangement drawings, water balance diagrams, civil design, single-line diagrams and 3-D modeling for visual simulations. This information is utilized by the environmental permitting team to complete an permitting applications to the California Energy Commission and other regulating agencies.

BRIGHTSOURCE INDUSTRIES ISRAEL, IVANPAH SOLAR ELECTRIC GENERATING FACILITY – Nipton, California

Project Manager for the performance of engineering and design services for the construction of a heliostat pre-assembly facility. The facility will receive heliostat components in shipping containers and assembly them into heliostats using construction labor at the rate of several thousand per week.

NYPA 500 MW PLANT AT POLETTI – New York, New York

As Project Manager performed Black Start Study for this 500 MW combine-cycle power plant. Study included evaluation more than ten options involving both onsite and offsite power sources.

Channing S Haskell, PE (continued)

GAINESVILLE REGIONAL UTILITIES, DEERHAVEN 2 AQCS PROJECT - Gainesville, Florida

Project Engineering Manager; Retrofit of a Babcock Power Selective Catalytic Reduction (SCR) System, Babcock Power Dry Flue Gas Desulfurization System, and Hamon Fabric Filter on a 240 MW coal-fired power plant. Additional Equipment included a urea hydrolysis system for ammonia production, rail and truck unloading and conveying system for pebble lime, lime hydration system, and fly ash conveying and storage system. Services included engineering, procurement, and construction. As Engineering Project Manager, responsible for day to day management of all project engineering and design activities, production of engineering deliverables according to the project schedule and within budget. Additional duties included review of project staffing levels to ensure that technical and schedule requirements were met, performed project member reviews and forwarded evaluations to each team member's discipline manager, monitoring scope and notifying project management of out-of-scope work, preparation of month progress reports for the Client, and monitoring the receipt, distribution, and return of shop drawings.

XCEL ENERGY HIGH BRIDGE COMBINED CYCLE - St. Paul, Minnesota

Assistant Project Manager; 570 MW gas-fired combine-cycle power plant located on an existing plant site approximately 2 miles from downtown St. Paul. Project services included engineering, procurement, and construction. The plant consists of two Mitsubishi M501F combustion turbine generators (CTGs), two Nooter/Erikson heat recovery steam generators (HRSGs) with supplemental firing and selective catalytic reduction systems, Mitsubishi steam turbine generator (STG), and an Emerson Process Management Ovation distributed control system (DCS). As Engineering Project Manager, administered project change process including identification of out of scope work, pricing of work, Client approval, and revision of contract documents; monitored equipment procurement process, and compiled the external monthly report. Additional duties included development of a database for tracking vendor and contractor diversity for reporting to the Client's corporate diversity program managers, produced technical descriptions and drawings for permits to modify the intake structure located on the Mississippi River, and developed a database to track spare parts for project equipment for incorporation into the Client's inventory control system.

NV ENERGY HARRY ALLEN 3 SIMPLE CYCLE PROJECT - Las Vegas, Nevada

I&C Engineer; Project entailed the addition of an 80 MW ultra low NO_x General Electric 7EA combustion turbine generator, installation of a new Remote Terminal Unit (RTU), and replacement of an existing CTG's Mark V turbine control system and Bailey Controls balance of plant control system with two new GE Mark VI control systems. Project services included engineering, procurement, and construction. As I&C Group Leader, Mr. Haskell supervised and developed all engineering and design activities for the project's instrumentation and controls.

GE AERO/BASIN ELECTRIC POWER COOPERATIVE, GROTON GENERATING STATION - Groton, South Dakota

I&C Engineer; Balance of plant engineering for a 100 MW gas-fired simple cycle power plant on a green field site. The plant consisted of one General Electric LMS100 combustion turbine generator and General Electric Mark VI balance of plant control system. Project services included engineering and design. As I&C Group Leader, supervised all engineering and design activities for the project's instrumentation and controls.

GENWEST SILVERHAWK COMBINED CYCLE - Las Vegas, Nevada

I&C Engineer; 570 MW gas-fired combined-cycle power plant. The project scope included engineering, procurement, and construction. The plant consists of two Siemens 501F combustion turbine generators,

Channing S Haskell, PE (continued)

two Alstom heat recovery steam generators with supplemental firing and selective catalytic reduction systems, General Electric steam turbine generator, an ABB Symphony distributed control system and an ABB continuous emissions monitoring system. As instrumentation and control systems group leader, was responsible for and supervised all engineering and design efforts related to the project's instrumentation and control systems.

PINNACLE WEST ENERGY WEST PHOENIX 5 COMBINED CYCLE - Phoenix, Arizona

I&C Engineer; 530 MW gas-fired combined-cycle power plant. Engineering, procurement and construction of the project were included in its scope. The unit included two Siemens 501F combustion turbine generators, two Kawasaki heat recovery steam generators with supplemental firing and selective catalytic reduction systems, Siemens steam turbine generator, ABB Symphony distributed control system and an ABB continuous emissions monitoring system. As instrumentation and control systems supervisor, was responsible for overall project technical, quality and budget performance and assisting the project's I&CS group leader with his duties.

EL PASO CORPORATION, SHADY HILLS FACILITY - New Port Richey, Florida

I&C Engineer; EPC of a 570 MW gas/oil fired simple-cycle plant. The plant consisted of three GE 7FA CTGs, GE Fanuc programmable logic controller, Horiba CEMS and a Hathway remote terminal unit. As field instrumentation and control systems start-up engineer, led the effort to commission the plant's instrumentation and controls, programmable logic controller control system and plant's remote terminal unit that communicated plant data to three remote sites.

MIRANT CORPORATION, BOSQUE COUNTY PROJECT - Laguna Park, Texas

I&C Engineer; EPC of a simple-cycle plant generating 570 MW. The plant consisted of three GE 7FA combustion turbine generators, a General Electric Fanuc programmable controller and a Horiba Continuous Emissions Monitoring System. As instrumentation and control systems group leader, responsible for control system hardware and functional specification, control system design, specification of instruments and control devices, and wiring design.

BASF FINA PETROCHEMICALS, NAPHTHA STEAM CRACKER - Port Arthur, Texas

I&C Engineer; Cogeneration plant to provide steam/electric power for the naphtha steam cracking process. Two General Electric 6B CTGs produce a total of 75 MW of electric power, two Deltak heat recovery steam generators produce a total of 680,000 lb/hr of steam at 1560 psi and 950F. A 150,000 lb/hr ABB auxiliary boiler provided. Project scope included engineering, procurement and construction. The entire facility including the cogeneration plant utilized a Foxboro I/A disturbed control system. As instrumentation and control systems group leader, was responsible for all instrumentation and control systems including the control system hardware and functional specification, control system design, specification of instruments, and wiring design.

BASF CORPORATION - Freeport, Texas

I&C Engineer; Cogeneration plant to the existing chemical plant facility included an 85 MW GE 7EA combustion gas turbine, Keystone-Allborg heat recovery steam generator with supplemental firing, a 12.5 MW non-condensing Dresser steam turbine generator, a Honeywell TDC 3000 distributed control system and a predictive emissions monitoring system. Project scope included engineering and procurement. As instrument and control systems group leader, developed specifications for instruments and control equipment, instrument and input/output lists, and wiring design.

Channing S Haskell, PE (continued)

EXXON CORPORATION/ENTERGY CORPORATION - Baton Rouge, Louisiana

I&C Engineer; Cogeneration project involved the replacement of existing boilers by a 150 MW combustion gas turbine generator and heat recovery steam generator. Project scope confined to conceptual engineering. As instrumentation and controls engineer, developed and reviewed P&IDs, developed control strategies and cost estimates for instruments and control equipment.

RELIANT RESOURCES - New Florence and Shelocta, Pennsylvania

I&C Engineer; Conemaugh Station, Units 1 and 2 and Keystone Station, Units 1 and 2. Controls upgrade replacing boiler controls, burner management systems and motor controls with Honeywell TDC-3000 distributed control systems on four 840 MW coal-fired super-critical plants. As project engineer, supervised the engineering effort on project. Major engineering tasks included extensive site investigations, specifying new instrument and control equipment, engineering and designing the disconnecting and reconnecting of 4500 cables per unit and planning activities so that work could be completed within the twelve week outage at each unit.

XCEL ENERGY BLACK DOG STATION UNIT 2 - Burnsville, Minnesota

I&C Engineer; Project replaced a pulverized coal balanced draft boiler with a Foster Wheeler atmospheric fluidized bed boiler for this 130 MW plant. Engineering, procurement and construction management were included in the scope of this project located 20 miles south of Minneapolis, Minnesota. As instrumentation and controls engineer, specified additional instruments and a host computer interface enabling additional data gathering for EPRI program.

ROCKWELL INTERNATIONAL CORPORATION - Columbus, Ohio

I&C Engineer; Project included addition of dry scrubber, bag house, induced draft fans and stack to control emissions from existing industrial coal-fired power plant. As lead electrical engineer, supervised the development of project's design criteria, site investigations, load studies, equipment specifications and installation drawings, bid evaluations and review vendor drawings.

NV ENERGY NORTH VALMY STATION UNIT 2 - Battle Mountain, Nevada

I&C Engineer; Expansion of North Valmy Station by the addition of a 263 MW coal-fired power plant. Engineering, procurement and construction management were included. Plant included a Foster Wheeler boiler, GE steam turbine, Rockwell dry scrubber, Foxboro Spec 200 boiler control system, Electronics Corporation of America burner management system and a Foxboro plant computer. As electrical engineer, performed short circuit studies, supervised production of electrical drawings and cable and raceway schedule, and provided field construction support.

NV ENERGY NORTH VALMY STATION UNIT 1 - Battle Mountain, Nevada

I&C Engineer; Coal-fired 250 MW power plant utilizing a Babcock and Wilcox boiler, Westinghouse steam turbine, Foxboro Spec 200 boiler control system, Forney burner management system and Westinghouse plant computer. Project scope included engineering, procurement and construction management. As controls engineer, engineered a distributed digital control system utilizing a Foxboro 3 minicomputer and Motorola radio system to control eight wells located between five and fifteen miles from the station. Additional tasks included engineering and design for the plant computer and field based construction support and startup.

Matt Stucky

Manager, Business Development

Summary

Mr. Stucky joined Abengoa Solar in 2010, after eight years as a consulting engineer in the municipal water and wastewater industry. He has bachelors' degrees in both civil engineering and environmental studies, as well as a master's degree in environmental engineering, and has been a registered civil engineer in the state of California since 2004. Aided by his experience with technical, interdisciplinary projects and his environmental background, he adds his management and organizational skills to the Abengoa Solar business development team, where his primary focus is on project permitting.

Professional Experience

Abengoa Solar LLC
Manager, Business Development

Oakland, California
5/10 – Present

- Manage and coordinate the development of projects, including due diligence, permitting, interconnection, and financing.
- Led the federal permitting process for the Mojave Solar Project, a 250 MW CSP project. The US Department of Energy was the lead agency under the National Environmental Policy Act, and the Bureau of Land Management was a coordinating agency. Although Southern California Edison was responsible for the transmission upgrades serving the project, these upgrades were also covered by the project's federal environmental documents, adding further complexity to a time-constrained permitting process. All approvals were received in time for the project to be successfully financed with a Federal Loan Guarantee.
- Managed compliance activities for the Mojave Solar Project, ensuring that all pre-construction reports, plans, surveys, and other activities were executed to the satisfaction of the California Energy Commission prior to the commencement of project construction. Successfully met critical deadlines to ensure that pre-construction activities occurred during the allowable windows and that full project construction started in time to allow the project to qualify for expiring federal incentives.

Carollo Engineers
Engineer

Walnut Creek, California
7/02 – 5/10

- Managed design teams of engineers and drafters in the production of construction documents.
- Acted as resident engineer during the construction of a \$105 million wastewater treatment plant expansion. Responsible for coordinating the efforts of supporting engineers and administrative staff, answering requests for information, producing design changes, and evaluating and negotiating change orders with the contractor.

- Designed sludge mixing and heating processes, solids handling and dewatering processes, an onsite sodium hypochlorite generation system, chemical storage and delivery systems, an ultraviolet disinfection process, a trickling filter, and various pump stations.
- Performed complex hydraulic analyses of both open channel and closed piping systems.
- Evaluated various water treatment processes and technologies, produced cost estimates, and presented design ideas and options to clients.
- Prepared contractual and technical documents such as scopes of work, specifications, and operations and maintenance manuals.

U.S. Public Health Service
Junior Commissioned Officer

Seattle, Washington
6/01-8/01

- Interned with the U.S. Public Health Service's Indian Health Service, a federal health program for Native Americans.
- Assisted with water and wastewater projects on Native American reservations in the Seattle area.
- Modeled a community water distribution system, sited a water reservoir, and inspected the construction of a sewer main and lift station.

Education

- M.S. in Environmental Engineering, University of California-Berkeley, 2002
- B.S. in Civil Engineering, University of Kansas, 2001
- B.S. in Environmental Studies, University of Kansas, 2001

Licenses and Accreditation

- Professional Engineer, Civil, State of California

Charles Turlinski

San Francisco, California • cturlinski@gmail.com • (415) 990 8746

Experience

BRIGHTSOURCE ENERGY	OAKLAND, CA	2011-PRESENT
<i>Senior Director – Project Development</i> Development lead for 500 MW Palen Project <i>Project Management and Pipeline Development:</i> <ul style="list-style-type: none"> ▪ Managed interconnection process to LGIA and Full Capacity Deliverability in line with PPA obligations. <i>Origination, Technology Commercialization and Project Financing</i>		
EDP RENOVAVEIS/HORIZON	SAN FRANCISCO, CA	2008-2010
<i>General Manager - Solar (SPM) - Direct Report to EDPR's Chief Development Officer</i> Led the creation of EDPR's solar development team resulting in a 700+ MW project pipeline. <i>Project Management and Pipeline Development:</i> <ul style="list-style-type: none"> ▪ Built and managed EDPR's 4 person North American solar development team responsible for site assessment, land acquisition, interconnection, permitting and early-stage engineering activities. ▪ Responsible for \$2.5mm+ annual budget and definition of team's annual, quarterly and monthly goals. ▪ Led financial performance analysis of each project for executive committee approval. ▪ Managed company's RFP responses for utility scale solar PPA's in Arizona and California markets. <i>Market Analysis & Technology Assessment:</i> <ul style="list-style-type: none"> ▪ Defined company's entry strategies for high value North American and European markets. ▪ Spearheaded comparative technology suitability assessments (CSP vs PV; Trough vs Power Tower; CdTe vs c-Si). ▪ Represented the company in multiple speaking engagements at various industry conferences (Platts, CSPToday). ▪ Participated in EDPR's investment analysis and exit of Andasol (50 MW solar trough with storage in Spain). 		
HORIZON WIND ENERGY	ALBANY, NY	2005-2008
<i>Project Manager</i> Development lead for the 227 MW Marble River Wind Farm and Horizon's New York project pipeline (300+ MWs). <i>Project Development & Management:</i> <ul style="list-style-type: none"> ▪ Responsible for project definition, land acquisition, permitting (local, county, state & federal), engineering, resource assessment, and maintaining a constructive relationship with the community. ▪ Managed annual project budget of \$3-5mm and project team of 3 project developers. ▪ Led successful bidding strategy for \$100mm NYSEERDA REC contract. ▪ Negotiated Payment in Lieu of Taxes (PILOT) and Host Community Agreement with local jurisdictions. ▪ Deeply involved in BOP, EPC contract negotiation and project finance efforts. ▪ Executed \$20mm buy-out of project joint venture parties. <i>Regional Team Leadership Activities:</i> <ul style="list-style-type: none"> ▪ In charge of early-stage definition, development & progress of two adjacent wind farms (300 MWs) in upstate NY ▪ Participated in Goldman Sachs acquisition, re-branding and subsequent sale of Horizon Wind Energy. 		
CITIZENS ENERGY	BOSTON, MA	2004
<i>Project Manager (Summer & Fall Internship)</i> Headed by Joseph Kennedy, Citizens Energy is active in the development of wind and alternative energy. <ul style="list-style-type: none"> ▪ Successfully led NYSEERDA RFP response for a \$400,000 grant to fund early stage project development. ▪ Authored a market comparison and analysis of wind energy in developing nations. 		
INTEGRATED SOLUTIONS TECHNOLOGY	HONG KONG/PHILIPPINES	1999-2003
<i>Co-Founder - Director Sales & Marketing</i> Start-up focused on software development and integration for the apparel supply chain. IST grew to 80+ employees. <ul style="list-style-type: none"> ▪ Reported directly to the CEO and quarterly to the board with P&L responsibility. ▪ Built IST's external revenues from 0 to \$1.2 million in 2 years. ▪ Managed a cross-disciplinary team of 27 developers, account managers, and support staff. 		
LUEN THAI INTERNATIONAL GROUP	HONG KONG	1998-1999
<i>Manager</i> A privately held apparel-manufacturing group with 12,000 employees and \$500 million per year in revenues. <ul style="list-style-type: none"> ▪ Managed the planning & implementation of a project plan to re-engineer the garment group by business process. ▪ Implemented internationally recognized ISO 9000 quality programs through multiple factories in four countries. 		
Education		
MIT Sloan School of Business	<i>MBA</i>	2005
- MIT Energy Club Founding Officer; MIT \$100k Cleantech Business Plan Mentor/Coach		
Stanford University	<i>Non-Degree Coursework</i>	2002
- Decision Analysis in Uncertainty; Computer Science		
Skidmore College	<i>Bachelor of Science</i>	1998
Saratoga, NY		