

Applicant's Supplemental and Rebuttal Testimony

Application for Certification (08-AFC-5)
Imperial Valley Solar, LLC

DOCKET

08-AFC-5

DATE MAY 10 2010

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Submitted to:
Bureau of Land Management
1661 S. 4th Street, El Centro, CA 92243



Submitted to:
California Energy Commission
1516 9th Street , MS 15, Sacramento, CA 95814-5504



Submitted by:
Imperial Valley Solar, LLC
4800 N. Scottsdale Road, Suite 5500, Scottsdale, AZ 85251



With Support From:
URS Corporation

May 2010



May 10, 2010

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Imperial Valley Solar (formerly Solar Two) (08-AFC-5)
Applicant's Submittal of Supplemental and Rebuttal Testimony

Dear Mr. Meyer:

On behalf of Imperial Valley Solar (formerly Solar Two), LLC, URS Corporation Americas (URS) hereby submits the Applicant's Supplemental and Rebuttal Testimony.

Applicant hereby submits prepared testimony on the "remaining topics", as directed by this Committee's scheduling orders. Due to the nature of the testimony, there is also testimony in the "ready topics" where appropriate. With regard to the "ready topics", the only testimony filed in these areas in a timely fashion was the testimony of Tom Budlong. Applicant hereby submits rebuttal testimony in various areas addressed by Mr. Budlong. Finally, in order to fully address the issues, Applicant has responded to certain statements made in the timely filing of the California Native Plant Society, even though the plant society declared that their submittal was not testimony.

Additionally, this submittal contains four new exhibits and two new resumes, all of which are provided behind the supplemental and rebuttal testimony.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit on behalf of Imperial Valley Solar, LLC.

Sincerely,

Angela Leiba
Project Manager

AL: ml

Applicant's Exhibit List – Exhibits 1 through 25

Updated 5/10/2010

<u>Exhibit</u>	<u>Description</u>	<u>Docket Date</u>
1	Application for Certification, Volume I and II	June 6, 2008
2	Air Quality Information for Data Adequacy	July 25, 2008
3	Responses to Imperial County questions	September 3, 2008
4	E-mail regarding school impact fees	September 10, 2008
5	E-mail regarding property taxes	September 10, 2008
6	Data Adequacy Supplement	September 26, 2008
7	CEC/BLM DR Responses 1-52	December 8, 2008
8	SES Alternatives and Cumulative Impacts	February 8, 2009
9	CEC/BLM DR Responses 1-3, 5-10, 14-15, 24-26, 31-32, 36-38, 44, 111-127	March 19, 2009
10	CEC/BLM DR Responses 53-110	March 26, 2009
11	Supplemental Cumulative Analysis	April 29, 2009
12	CEC/BLM DR Responses 128-141	June 5, 2009
13	CURE DR Responses 1-143	June 6, 2009
14	Supplement to AFC	June 12, 2009
15	CEC/BLM DR Responses 31-32	July 2, 2009
16	CEC/BLM DR Responses 151-155	July 7, 2009
17	CURE DR Responses 143-178	August 5, 2009
18	Additional Supportive Materials, Biology & Water	September 23, 2009
19	CEC/BLM DR Response 142-150	October 17, 2009
20	Current Project Acreage	October 28, 2009
21	Supplemental Biology and Water Information	October 30, 2009
22	Revised page 300-1 of SWPP	December 21, 2009
23	Corridor Conflict Analysis	January 8, 2010
24	San Diego MTS Agreement	January 8, 2010
25	Glint and Glare Study	April 28, 2010
26	Juan Batista de Anza Historic Trail Visual Impact Analysis	January 22, 2010
27	Additional Information Related to SWWTF Improvements	February 26, 2010
28	Applicant's Comments in the SA/DEIS	March 12, 2010
29	Modeling Analysis for the Federal NO2 1-Hour Standard	March 31, 2010
30	Imperial Valley Solar Sediment Transport Analysis	April 26, 2010
31	Early Spring 2010 Botanical Surveys	April 26, 2010
32	Supplement to the AFC	May 5, 2010
33	Overview of the SWWTF Project Limits	May 10, 2010
34	Revised Project Wash Avoidance Site Plan	May 10, 2010
35	Letters of Project Support	May 10, 2010
36	Peninsular Big Horn Sheep Locations and Critical Habitat	May 10, 2010

SUPPLEMENTAL PREPARED AND REBUTTAL TESTIMONY
OF
MARC VANPATTEN
Project Description/Alternatives

1. Q. Are you the same Marc Van Patten that submitted testimony in this proceeding on March 15, 2010

Yes. My resume submitted at that time is still valid.

2. Q. Are you sponsoring any additional exhibits in this proceeding?

Yes, I am sponsoring exhibit 27, Additional Information Related to SWWTF Improvements, exhibit 28, Applicants comments on the SA/DEIS, exhibit 32, Supplement to the AFC, and I am sponsoring exhibit 33, Overview of the SWWTF Project Limits.

3. Q. Why was it necessary to change the water line?

The water line route was changed slightly at the location of its entrance into the project site in order to avoid some environmentally sensitive areas on the northeastern portions of the project site. The water line route was extended further west along Evan Hewes Highway and then routed south under Evan Hewes Highway, then under the railroad track and then into the project site.

3. Q. Why is it necessary to revise the transmission line pathway?

SDG&E notified Tessera Solar in January/February of 2010 that they had revised the plan to connect the project to the Imperial Valley Substation with the objective to interconnect to Bus Bay 19. As a result of this revision, our transmission line needed to be moved a small amount near the Imperial Valley Substation in order to provide for a better interconnection route into the substation.

4. Q. Please describe the reasons for the change in the project's hydrogen use.

Although the SunCatcher technology is reliable and tested, as a relatively new technology, there are periodic modifications/improvements being made to make the technology more reliable, efficient and cost-effective. When the SunCatchers were constructed at Maricopa, the SunCatchers were modified from a distributed system to a centralized system supplying all the SunCatchers with hydrogen from a single location. As a result, the initial hydrogen fill amounts increased. Now, the amount of hydrogen stored for each SunCatcher will be increased from 3.4 to 11 standard cubic feet (scf). Additionally, the hydrogen replenishment system was adjusted (provides more hydrogen pressure sooner) to reduce the cyclic heat loading on the heater head of the SunCatcher's power conversion unit, thereby increasing the

longevity of the heater head. This adjustment had the effect of increasing the hydrogen use from 195 scf to approximately 600 scf per SunCatcher per year.

5. Q. Staff recommended that the project treat the SunCatcher units to reduce glint and glare. Has Tessera investigated the ability to treat the units?

Yes. Tessera Solar spent a considerable amount of time evaluating the glint glare issue and employed industry experts from POWER Engineers to develop a glint glare analysis. Based on the conclusions contained within the Glint/Glare Study and attendant visual animations, it was determined that painting the SunCatcher would 1) not have a notable effect reducing project contrast levels or levels of potential impact and 2) would have no effect on reduction of glint and glare as components that produce de minimus levels of glint and glare (mirrors and ceramic heat absorber) cannot be painted without rendering the SunCatcher inoperable. However, major features of the SunCatcher (e.g. boom, PCU, etc.) come out of the factory with non-specular surfaces that are blue/grey, similar to other electrical facilities (e.g. substations, transmission towers, transformers, etc.). Furthermore, the back of the mirror facets on each SunCatcher, although currently painted a shade of white, are always in the shade. Nonetheless, Tessera Solar and Stirling Energy Systems continue to investigate ways to improve the final surface treatment while staying within the requested Vis 1 Condition of Certification criteria.

6. Q. Now that Maricopa is operational, have you developed any conclusions on constructing and operating these units?

Yes. We learned many things from the construction of Maricopa and have subsequently restructured our field construction to a single BOP contractor and separated the assembly work to an on-site factory that will be separate from construction. In regard to operation, we have been able to use the Maricopa facility to validate what we predicted to be the most effective operations and maintenance practices. We have also been pleasantly surprised to have achieved such high availability (more than 95%) in only the first 2 months of operation.

7. Q. Dr. Chang makes three recommendations to reduce scour, do you agree with those mitigation measures?

Yes, with a single exception. All of the crossings can be at grade except the project needs a single crossing with culverts or arched bridges so that there is access to public roadways for emergency purposes during rainfall events. The design of this culvert or arch bridge crossing will be such that it does not adversely impact the natural flow or sediment transport in the washes that it crosses.

8. Q. Mr. Budlong has asserted in his opening testimony that the Stirling engine has no operating history. Do you have any comments on the viability of the SunCatcher technology?

While the SunCatcher is an innovative technology, I would not agree that it is unproven or untested technology. The SunCatcher was developed over a number of years by a number of parties including McDonnell Douglas, who developed it in 1984, and more recently was installed in the Sandia National Laboratory in 2004-2006. Since that time SunCatchers have been operated for over 38,000 hours on sun at Sandia National Laboratory. They have been tested under all types of conditions and repeatedly modified to improve the efficiency, reliability, and commercial applicability of the technology.

Maricopa Solar is a fully operational, commercial version of a power plant using the SunCatchers developed and refined at Sandia. The Maricopa plant consists of 60 SunCatchers capable of generating 1.5 megawatts of power. It represents the basic "building block" of the larger power plants being built by Tessera Solar – each plant is made up of multiple groupings of 60 SunCatchers (each 1.5 megawatts). Maricopa Solar has been operational since December of 2009. It has not only allowed us to demonstrate commercial operation of the technology but, as with any new technology, has taught us valuable lessons for subsequent commercial projects including the Imperial Valley Solar Project.

9. Q. Do you have any comments on the project's water source?

Yes. Although we are confident that the EIR for the upgrade of the Seeley Wastewater Treatment Facility will be approved, the upgrade completed and water resulting from the completed upgrade will be available to the Imperial Valley Solar Project, an alternate source of water is necessary so that project construction can commence on schedule. The Dan Boyer Water Company water is from an established source, operating under permit from Imperial County, which has a history of sales to industrial uses in the area since the 1950s. This water is not part of any community's potable water system, and no new facilities need to be constructed for use by the project. We have a contract for water from this source and are proposing to use it for construction and/or operation until water from the Seeley Wastewater Treatment Facility is available.

10. Do you have any comments on the alternatives discussed in the Staff Assessment/Draft Environmental Impact Assessment?

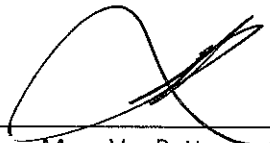
Yes. My primary concern with the alternative analysis contained in the SA/DEIS is that it did not fully address the feasibility or practicability of developing the various alternatives. The smaller alternatives, particularly the 300 MW alternative and the two drainage avoidance alternatives are not practicable because the economics of scale achieved with a 750 MW project would not be available and the price per SunCatcher would increase. With the smaller projects, the cost of producing and assembling the SunCatchers and the cost of common facilities, such as water pipe line, electric transmission line, the main services complex, water treatment facilities, and roads would be spread to a smaller number of SunCatchers. The resulting cost of this project would not allow it to satisfy the pricing terms of the Power Purchase Agreement, which has been submitted for approval by the California Public Utilities Commission.

The schedule for a smaller project would be similar to the current schedule for the first phase of the proposed project. As described in the SA/DEIS, not only is there no plan for replacing the capacity lost with a smaller alternative, but any schedule associated with developing the additional generating capacity would certainly be much later than if that capacity were to be constructed as part of this project. This would result in delaying the greenhouse gas benefits of solar energy production and could hinder the ability of California in meeting its renewable portfolio standard.

There are environmental impacts associated with the construction of facilities necessary to build this solar project. Many of these facilities, such as the transmission line interconnection, water delivery line and main services complex would have to be constructed for any additional project to make up the remaining capacity. These facilities are also likely to have unavoidable environmental impacts.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

5/10/10
Date


Marc VanPatten

SUPPLEMENTAL PREPARED TESTIMONY
OF
JULIE MITCHELL
Air Quality
Public Health

1. Q. Are you the same Julie Mitchell that submitted testimony in this proceeding on March 15, 2010?

Yes, and my resume submitted in Applicant's Prehearing Conference statement is still valid.

2. Q. What is the purpose of your testimony?

My testimony provides our modeling for the new federal NO2 standard.

3. Q. Are you sponsoring any exhibits in this supplemental testimony?

Yes, I am sponsoring exhibit 29, Modeling analysis for federal NO2 1-hour standard.

4. Q. Will the Imperial Valley Solar facility comply with these rules?

Yes, it will.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

Date May 10/10

Julie Mitchell

PREPARED SUPPLEMENTAL AND REBUTTAL TESTIMONY OF
MATT MOORE
Water Resources

1. Q. Are you the same Matt Moore that submitted prepared testimony in this proceeding on March 15, 2010?

Yes. My resume, submitted in Applicant's Prehearing Conference Statement, remains valid.

2. Q. What is the purpose of your testimony in this proceeding?

Although Mr. Beltran of the California Native Plant Society claims that they "have no testimony", they also claim that "a water supply has not been identified". This testimony is intended to rebut this statement. I am sponsoring analyses contained within exhibit 27, Additional Information Related to SWWTF Improvements and portions of the water resources analysis contained in exhibit 32, Supplement to the AFC.

3. Q. Please describe the water supply for the Imperial Valley Solar project.

Based upon current engineering estimates, the project will require approximately 50 AFY during construction and approximately 33 AFY during project operations. In order to peak construction water demands (such as concrete pours), water would be stored onsite during times of lower water demands. There are two sources of water for project use: water from the Seeley Wastewater Reclamation Facility (WWRF) through SCWD and purchased water from Dan Boyer Water Company. As construction of the Imperial Valley Solar facility is expected to commence as early as October 2010, it is imperative to have a reliable water supply by this date.

4. Q. Please describe the Seeley water supply.

The town of Seeley lies approximately 12 miles east of the project boundary. The SWWTF currently treats the town's wastewater and this facility will be upgraded so that water will be treated to a tertiary level. Applicant has submitted a "will serve" letter for the project's use of this water.

5. Q. When will this water supply be available to the project?

The reclaimed water will be available for use by the Imperial Valley Solar Project following completion of the Seeley upgrade project and construction of the water transmission line. The upgrade project will be completed after certification of an Environmental Impact Report and approval by Seeley County Water Authority. It is currently anticipated that the EIR will be certified and the upgrade project considered and approved in November of 2010. I am confident that the environmental report will demonstrate that impacts to the environment from construction and operation of the Seeley WWRF will be less than significant. I have reviewed the environmental information developed for the Seeley

upgrade project and I believe that based upon my current understanding of the Seeley WWRF upgrades that it will not result in significant environmental impacts.

Seeley WWTF will file for a Petition for Change in Use. This is required by the California State Water Resources Control Board, Division of Water Rights, and will be submitted to the SWRCB by Seeley County Water Authority. Section 1211 of the Water Code requires that before making a change in the point of discharge, place of use, or purpose of use of treated wastewater, the owner of the treatment plant must seek approval from the Division of Water Rights, which is accomplished by filing a Petition for Change for Owners of Waste Water Treatment Plants (Petition for Change). The Petition for Change will be evaluated by SWRCB and applicable other state agencies (California Department of Fish and Game) for compliance with the California Environmental Quality Act.

Exhibits 27 and 32 contain additional information on the Seeley WWTF upgrade. I have concluded after reviewing this report that there are no major impediments to construction and operation of the Seeley WWTF upgrades.

6. Q. Please describe the Dan Boyer water supply.

The Dan Boyer water supply is an existing well located approximately 3.5 miles southwest of the western project boundary. Water from this well has been sold to a variety of users since 1958. Historically, up to 100 AFY of water has been sold from this well, although the current permit held by this water company restricts pumping to 40 AFY. The Applicant has contracted for this 40 AFY supply so that water will be available to the project when project construction is scheduled to commence.

Construction of the Imperial Valley Solar Project will take approximately 40 months. In the event that Seeley construction water supply will not be available to the Project prior to October 2010, the Project will receive construction water from Dan Boyer Water Company. While it is anticipated that that operational water supply from SWWTF will be available within one year from the start of construction, should the upgrades to Seeley be delayed, the Project would use water supplied by Dan Boyer Water Company for both construction and operation. Because the Applicant cannot control the date that the Seeley water will become available, the Applicant and URS have analyzed potential impacts from the Dan Boyer Water Company as the Project's water source. It was determined that it is a reliable water source and would not result in significant impacts if used for the life of the Project, if needed. Once water from the SWWTF is available, water from the Dan Boyer well will only be used as a back-up supply.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010

Date



Matt Moore

PREPARED REBUTTAL TESTIMONY
OF
ROBERT K. SCOTT
Water Resources

1. Q. Please state your name and place of employment

My name is Robert K. Scott and I am a Vice President and Principal Geologist with URS. I am a professional licensed geologist in California and Arizona and a Certified Hydrogeologist in California. My resume is attached behind my prepared testimony.

2. Q. What is the purpose of your testimony in this proceeding?

It is my understanding that various intervening parties have claimed that the Imperial Valley Solar Project does not have a viable water source. I was directed by the Project to determine the ability of the Dan Boyer well to deliver the volumes permitted by the existing well permit and evaluate the quality of the well water. I am sponsoring analyses contained in exhibit 32, which is our supplemental report on this water source.

3. Q. Please describe what is contained in exhibit 32.

Exhibit 32 contains an analysis of the Dan Boyer water well. This report contains information on the quality and quantity of water from this source. It also contains well water characteristics, transmissivity and drawdown discussions. I conclude that the permit limits are reasonable and that sales of the permit limit (40 AFY) can be supported by the aquifer and that use of this water by the Imperial Valley project will have no significant impacts on the aquifer.

4. Q. What is your conclusion regarding the project's use of the Dan Boyer well water.

First, the project will be using water that is not dedicated to a single, higher use, such as potable drinking water. It has historically served as a source of water for construction purposes. Second, the volume of water that will be used is consistent with the Conditional Use Permit (40 AFY). As our evaluation indicates, this water use will not have an adverse impact upon the aquifer. Finally, the characteristics of the water make it suitable for the proposed uses by the Project.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010
Date

Robert K. Scott
Robert K. Scott

SUPPLEMENTAL PREPARED TESTIMONY
OF
PATRICK MOCK
Biological Resources

1. Q. Are you the same Patrick Mock that submitted testimony in this proceeding on March 15, 2010?

Yes, and my resume submitted in Applicant's Prehearing Conference statement is still valid.

2. Q. What is the purpose of your testimony?

My testimony summarizes the additional biological resource data requested by the agencies and intervenors, presents our conclusions based on that additional data, discusses the approach we used in performing various biological resource surveys, and comments on specific items in the Staff Assessment/Draft Environmental Impact Statement.

3. Q. Are you sponsoring any exhibits in this supplemental testimony?

Yes, I am sponsoring exhibit 31, the survey results from the early spring botanical surveys and exhibit 36, Peninsular Big Horn Sheep Locations and Critical Habitat.

4. Q. The applicant has been criticized for its approach in performing the biological resource surveys. Can you summarize that approach and discuss why you believe the aggregated biological survey data is acceptable and appropriate to use in this case.

The Applicant has performed numerous surveys for biological resources for this project. In total we have had over 4,670 hours in the field on biological surveys. These have included surveys for:

- Sensitive Plants – (Spring 2007, Spring 2008, Spring 2010, and planned surveys in fall 2010 to verify previous results)
- Flat-Tailed Horned Lizard – (May 2007 and Supplemental surveys of linears in May 2008)

The survey protocol for each of these surveys was approved in advance by CEC and BLM. Each of these surveys either used approved protocols or modified protocols that were approved in advance by the agencies.

In all cases the individuals performing the surveys either had or were under the direct oversight of individual that had the appropriate training and levels of experience to perform the surveys.

In response to requests from the agencies and intervenors, we have gone back and performed additional surveys. The most recent sensitive plant surveys for example were performed in addition to the two preceding surveys in response to the low rainfall years experienced during the prior surveys.

In aggregate, we believe that the surveys represent a comprehensive and accurate picture of the biological resources located on or in the vicinity of the project site in sufficient detail to understand the potential impacts and define appropriate mitigation.

5. Q. With respect to the most recent botanical surveys performed during this year of above average rainfall; did you identify any sensitive plants that were not observed during the preceding two surveys?

Yes, we found three CNPS List 2 species and two CNPS List 4 Watch List species.

6. Q. How does the observation of those species effect your conclusion on the project's potential impacts and mitigation?

The List 2 species detected occur as individuals or small groups of individual plants. I feel that given the level of habitat conservation in the project vicinity (Anza Borego State Park, BLM Management Areas), it is likely that these sensitive species are adequately conserved offsite and that the proposed mitigation for Flat-tailed Horned Lizard would also contribute to conserving rare plant resources in the project vicinity.

7. Q. The BLM has requested the applicant to perform additional sensitive plant surveys this fall. Do you have any comment on those surveys?

The BLM's requirement was initially intended to identify plants that may emerge following the summer monsoon season. All of the species that could potentially bloom in fall also bloom in spring, so we do not expect any plants to be found in the fall that were not observed in the recent two rounds of spring surveys. We do not have a problem performing these surveys to verify this expectation and make modifications to mitigation requirements if any unexpected species are observed.

8. Q. Peninsula big horn sheep were observed on-site during the spring of 2009. What is your conclusion regarding this observation and impacts of the project on this species?

Detection of Bighorn Sheep was not expected by any of the biologists involved in the project, including the wildlife agencies. We believe the sighting was anomalous. The expectation that bighorn sheep make frequent and biological important use of the IVS site is low due to the distance of the site from the core habitat areas 4-6 miles west of the site.

9. Q. What is your understanding of the agencies conclusions on this issue?

The CEC, USFWS, CDFG, and BLM biologists are in agreement that the sighting of bighorn sheep on the site in spring 2009 was an unusual occurrence and is unlikely to occur again. Therefore, it is not anticipated that the project will adversely affect the bighorn sheep.

10. Q. The flat-tailed horned lizard has been found on the project site. Will you briefly discuss the status of this species, the population levels you expect on site, and the mitigation proposed?

The flat-tailed horned lizard was proposed by the USFWS for listing under the federal Endangered Species Act. We performed 332 sample plot surveys for flat-tailed horned lizards in (May 2007) and supplemental transect surveys of the two linear project components in May 2008. These surveys detected a total 4 individuals of flat-tailed horned lizards. Based on the amount of suitable habitat, we expect the population to be about between 20 and 30 on the project site. Other population estimates have ranged between 2100 and 3500, but we believe these are high because so few individuals were detected during the intensive survey effort. A non-sensitive horned lizard species is also present onsite, so detection of lizard scat is not necessarily indicative of flat-tailed horned lizards being present.

Although suitable flat-tailed habitat and vegetation may remain on-site during construction and operation, we are proposing to mitigation based on an assumed loss of the entire population on the site.

The mitigation consists of 1:1 for onsite habitat acreage impacts and 5:1 for habitat acreage impacts along the transmission line ROW that is within the Yuha Desert Management Area. This mitigation is consistent with the agency approved management strategy for the flat-tailed horned lizard.

11. Q. Do you have any concern with the mitigation proposed in the SA/DEIS?

As written, the mitigation proposed in the SA/DEIS will require onsite conservation for list 2 species. That is a concern because given the industrial nature of the proposed facility; we believe offsite habitat mitigation would be more beneficial to the plant resource than onsite retention of small isolated populations of plants and the associated edge effects that would be extant with the project. Maintaining sustainable populations on the project is not practicable given the sensitivity status of the species, the small numbers present, and their distribution within the project boundaries. Offsite habitat mitigation for FTHL will also benefit rare plant resources in the project vicinity.

We have not heard back from the staff whether this change is acceptable. We would like the Committee to consider this issue if it is not resolved at the staff level.

12. Q. New regulations have been issued by the U.S. Fish and Wildlife Service regarding potential impacts to golden eagles. How do those regulations affect the proposed project?

There are no known golden eagle nesting areas within 10 miles of the site, so the site is considered potential foraging habitat for raptor species such as eagles, but no effects to nesting eagles is expected. Therefore, we do not believe that these regulations should affect the proposed project.

13. Q. The Seeley Wastewater Treatment Facility has been identified as the preferred source of water for the project. Concerns have been raised regarding the potential biological resource impacts resulting from upgrades required to the treatment facility. Do you have any comment on the potential for biological impacts?

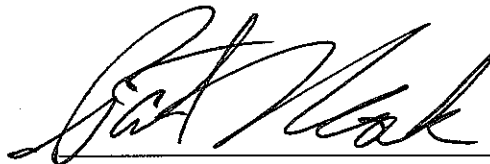
Since the construction work for the upgrades will be performed within the area already disturbed or previously developed by the existing treatment plant, the primary potential impact is indirect effects to riparian habitat and associated species resulting from the diversion of the treated effluent to the Imperial Valley Solar project. This concern was raised by CURE. In a comment on the Mitigated Negative Declaration issued by the Seeley County Water District, the U.S. Fish and Wildlife Service also raised questions on potential impacts to the Yuma clapper rail.

I have reviewed the biological survey and assessment work prepared by John Konecny and Dudek Associates. To date, Yuma clapper rail surveys have been reported as being negative and no incidental take of this listed species is expected.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

5-10-10

Date



Pat Mock

PREPARED TESTIMONY
OF
Michael Wood
Biological Resources - Sensitive Plants

1. Q. Please state your name and position.

My name is Michael Wood and I am a botanist/ecologist with Wood Biological Consulting. I am under contract to Tessera Solar working on the botanical resource assessment for the Imperial Valley Solar Project. My résumé is attached.

2. Q. What is the purpose of your testimony?

My testimony discusses the applicant's 2010 botanical surveys.

3. Q. With respect to the most recent botanical surveys performed during this year of above average rainfall; did you identify any sensitive plants that were not observed during the preceding two surveys?

Yes, we found the following:

- Brown turbans, annual (*Malperia tenuis* - Asteraceae; CNPS List 2.3; 10 widely spaced individuals).
- Harwood's milk-vetch, annual (*Astragalus insularis* var. *harwoodii* - Fabaceae; CNPS List 2.2; 35 individuals at 4 locations).
- Wiggin's croton, perennial (*Croton wigginsii* - Euphorbiaceae; CNPS List 2.2; up to 7 seedlings/young plants at a single location).
- Utah vine milkweed (*Funastrum [=Cynanchum] utahense* – Apocynaceae [formerly in the Asclepiadaceae] ; CNPS "Watch" List 4.2; approx 818 plants at 22 locations).
- Thurber's pilostyles (*Pilostyles thurberi* – Apodanthaceae [Rafflesiaceae in the Jepson Online Interchange]; CNPS "Watch" List 4.3; approximately 12 infected host plants - dye plant (*Psorothamnus emoryi*) at 6 locations.

4. Q. Do you have an opinion as to why these additional species were identified during the 2010 surveys but not found during the two previous surveys?

Yes. The 2009-2010 winter rainy season ended a severe three-year drought, delivering above average rainfall to the Sonoran Desert. As a result, there was a substantially greater wildflower display during the spring of 2010 compared to 2008. The 2010 surveys added a total of 24 native plant species, 2 subspecies and 2 varieties to the 2008 inventory.

5. Q. Can you describe the 2010 spring botanical surveys?

I have been and am currently participating in the 2010 spring botanical surveys for the Imperial Valley Solar Project. These surveys have been carried out in accordance with protocols¹ approved by

¹ See: California Department of Fish and Game (CDFG). 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. November 24. Available online at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf; California Native Plant Society (CNPS). 2001. *Botanical Survey Guidelines*. Revised June 2. Available on line at http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf; United States Fish and Wildlife Service (USFWS). 2000.

CEC, BLM, CDFG, and USFWS with fully qualified technical experts. All the personnel that performed the 2010 surveys are well trained botanists with many years of experience. Some members of the 2010 survey team participated in the 2008 surveys; the remainder, while new to the IVS site, have extensive experience with the flora of the California deserts. Prior to initiating each round of surveys, all personnel visited nearby reference populations of several of the target species and spent time on site working as a group to confer on the site's flora. Team members collected specimens in the field for plant identification working sessions each evening. A great deal of attention was spent on making species determinations and no species that could have been confused with any of the target species were left unidentified; all taxonomic uncertainties were resolved. All special-status target species found on site were collected and either compared with specimens stored in herbaria or were submitted to Dr. Jon Rebman, curator of the herbarium at the San Diego Natural History Museum.

6. Q. Based on your experience and expertise, do you believe that the surveys adequately identify all the native plants found on the project site?

Yes. Based on my experience, I am confident that the survey results provide a thorough and reliable identification of the native plants found on the site.

7. Q. The agencies are requesting that additional botanical surveys be performed during the fall. Do you have any comments regarding these surveys?

As suggested by Joy Nishida of the CEC, only 2 summer/fall flowering special-status species are known from Imperial County. These are Abrams' spurge (*Chamaesyce abramsiana* – Euphorbiaceae; CNPS List 2.2) and desert unicorn-plant (*Proboscidea altheifolia* – Martyniaceae; CNPS List 4.3). Abrams' spurge is an annual species found in habitats similar to those found in the study area and is recorded from the project vicinity; it might not have been recognizable during either the early or late spring 2010 surveys. Its current known distribution in Imperial County is east of Brawley and El Centro. No populations are known within 10 miles of the IVS site.

Desert unicorn-plant is a perennial, also recorded from habitats similar to those found on site. However, its recorded locales in Imperial County are entirely from the eastern portion of the county and, as a perennial, it would have been recognizable during the prior surveys. In my experience, it seems like an extraordinary requirement to complete fall surveys for a single species whose likelihood of being present onsite is moderate.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.



May 10, 2010
Date

Michael Wood

PREPARED TESTIMONY
OF
MIKE FITZGERALD
Biology

1. Q. Please state your name and place of employment.

My name is Mike Fitzgerald and I am the President and Senior Environmental Scientist with Ecosphere Environmental Services. Ecosphere is under contract to the Tessera Solar (TSNA) on the Imperial Valley Solar project. My resume is attached.

2. Q. What is the purpose of your testimony?

The purpose of my testimony is to discuss the potential biological impacts on aquatic resources that could result from the construction and operation of the Imperial Valley Solar Project.

3. Q. What exhibits are you sponsoring in this proceeding?

I am sponsoring Exhibit 31, entitled "Sediment Study for Three Washes at the Solar Two Project Site in Imperial Count, CA" January 2010. This report was performed by Dr. Howard H. Chang. I have reviewed this report and concur in the methodology and conclusions reached by Dr. Chang. I am also sponsoring Exhibit 34, entitled Revised Project Wash Avoidance Site Plan, provided within this submittal. This Figure was prepared by Ecosphere and shows a modified project design that the Applicant believes is the Least Environmentally Damaging Practicable Alternative (LEDPA).

4. Q. Please describe Dr. Chang's report

This study was completed to evaluate the potential direct and indirect impacts of the proposed project on stream hydrology and sediment transport both on and off the site. It evaluated three washes on the site and used the FLUVIAL-12 model to simulate hydraulics of flow, velocity, sediment transport, sediment delivery and potential stream channel changes along these washes. Dr. Chang made the following conclusions:

- a. Following project construction, flow depths in the washes in a 100-year flood are less than one foot and occur as low velocity events.
- b. The project would not result in substantial changes in channel bed in the studied channel reaches.
- c. At-grade road crossings will not cause major changes to sediment delivery patterns
- d. Sediment deposition and induced erosion by at-grade road crossings will not be substantial.
- e. Long-term sediment delivery and transport will not be impacted by the at-grade road crossings.
- f. Installation of sediment basins will have long-term impacts on sediment delivery onsite and down stream of the project area.

Dr. Chang's report concluded that to minimize impacts, it would be ideal if the project caused no substantial changes to sediment delivery. He identified proposed road crossings, sediment basins, culverts, vegetation and buildings as sources affecting sediment transfer. In order to "mitigate adverse impacts" Dr. Chang recommended the following mitigation measures:

- a. Delete all sediment basins,

- b. Change all road crossings to at-grade crossing with all culverts removed, and
- c. Consider the total scour depth of five feet in the Suncatchers in washes.

5. Q. Have the mitigation measures recommended by Dr. Chang been incorporated into the project by the Applicant?

With one exception, yes all the mitigation measures have been incorporated. They are described in the revised Plan of Development (POD) and in the project Clean Water Act 404B-1 Alternatives Analysis that evaluated avoidance and minimization of project impacts to Waters of the U.S. scheduled to be submitted to the US Army Corps of Engineers (USACOE or Corps) and the Environmental Protection Agency (EPA) on or before May 24th, 2010. In evaluating the potential to avoid and minimize impacts to waters of the United States, we determined that it was not possible to install at grade crossings along the entire Lifeline road, as the project needs to have one access road that will be passable during large storm events. Therefore, in order to adhere to Dr. Chang's recommendation to remove culvert crossings, TSNA is planning to construct an elevated concrete ConSpan or Bebo crossing; which is essentially a bridge over Wash G without piers in the channel. This should ensure that the few necessary elevated crossings do not impact long-term sediment delivery and transport of the drainages.

6. Q. Did the Applicant perform or contribute to other studies to understand the erosion and sedimentation issues associated with the proposed project?

Yes. At the recommendation of the USACOE, TSNA commissioned the Southern California Coastal Water Research Project (SCCWRP) to conduct a California Rapid Assessment Model or "CRAM" analysis of the ephemeral washes affected by the proposed project. In short CRAM is a methodology designed to support assessment and monitoring of all major wetland/riparian systems across all regions of the state. The output of the model is a single "condition score" for the assessment area, comprising the combined separate assessment scores for Landscape, Hydrology, and Physical and Biotic Structure. CRAM also provides the user with a separate "stressor checklist" to help identify sources of ecological degradation. Sedimentation and erosion is not the focus of CRAM, but is a component of the assessment tool. It should be noted that CRAM is not typically applied to desert wash systems and that in coordination with the USACOE and SCCWRP, this project is being used as a test case to determine how that model may need to be modified to accurately assess this type of environment.

CRAM assessments were completed for over 80 reaches of stream (ephemeral wash) systems on and off site to determine functional values of system. The results of the analyses are expected to be submitted to the USACOE on or before May 15th, 2010. Preliminary results, based on Ecosphere ecologists working with the SCCWRP personnel to collect the data, indicate that project washes will generally have low CRAM scores due to the simplicity of the physical structure of the systems and because relative to aquatic systems biological diversity is low.

7. Q. How do you anticipate that the results of the CRAM analysis will be utilized to help assess the project's impacts on aquatic resources?

As previously stated, the application of CRAM to desert wash systems is currently experimental. Because CRAM was designed for wetland complex and riverine systems we expect that condition scores will be low relative to wetter systems. It is my understanding that the Corps intends to use the condition score to supplement the characterization of ecological function and to possibly use this characterization to assist with the appropriate identification of suitable mitigation opportunities. However, as the results of the CRAM are still pending, precise application of the results is somewhat speculative.

8. Q. Moving on to the 404(b)(1) alternative analysis, can you please describe the efforts undertaken to evaluate the practicability of avoiding impacts to waters of the United States?

Under the Environmental Protection Agency's regulations, known as the 404(b)(1) Guidelines, the Corps can only authorize impacts to waters of the United States after it has determined that such impacts cannot practicably be avoided. An alternative is considered practicable if it is available and capable of being done taking in considerations of cost, logistics, and technology in light of the overall project purpose.

To assist the Corps in complying with these regulations, Ecosphere analyzed alternative project designs that could avoid or minimize impacts to waters of the United States and evaluated such alternatives for practicability. Ecosphere analyzed the practicability of and associated impacts to aquatic resources for the proposed project and five alternatives. The alternatives included the 300 MW Alternative, Corps Drainage Avoidance 1 and Corps Drainage Avoidance 2 alternatives evaluated in the SA/DEIS as well as modifications to the proposed project identified by the Applicant. The Applicant also analyzed the original project design considered by the Applicant which would have had a 900 MW nominal capacity and a no fill alternative.

9. Q. Please describe the results of this analysis.

Ecosphere determined the following:

The proposed project would result 166 acres of permanent impacts and 5.2 acres of temporary impacts to waters of the United States. It would achieve the Applicant's project purpose and would be practicable in terms of cost, logistics and technology.

The 300 MW alternative was designed to test the practicability of limiting the project to Phase 1 and would allow for the nominal generation of 300 MW of electricity. It would result in permanent impacts to 27 acres of waters of the U.S. and 7 acres of temporary impacts. It is not practicable as it would not allow the Applicant to meet its project purpose as it would result in a 60% reduction in the amount of energy generated and would significantly reduce the project's ability to assist SDG&E in meeting its Renewable Energy Portfolio requirements and to assisting SDG&E and the State of California in reducing greenhouse gas production. It is also not practicable in terms of cost as it would significantly increase the cost of generating electricity per KW to a level which would preclude the projects ability to sell the electricity to a regulated utility and to obtain necessary financing. It would also not be practicable in terms of logistics because it would preclude the placement of the main service complex in a central location.

The 900 MW alternative was the original project proposed by TSNA. It would result in permanent impacts to 205 acres and temporary impacts to 5.2 acres of waters of the U.S. It is practicable as it would allow the Applicant to meet its project purpose and would supply 100% of SDG&E's Renewable Energy Portfolio requirements. This alternative was practicable in terms of cost as it would significantly reduce the cost of generating electricity per KW to a level which would enable the project to sell the electricity to a regulated utility and to obtain necessary financing. This alternative, however, is not the LEDPA as it would result in an increase number of impacts to waters of the U.S.

The Applicants' Wash Avoidance Site Plan would allow for the generation of 709 MW of utility grade electricity. It was designed to test the practicability of washes identified by the Corps as providing

relatively high functions and values. It would result in permanent impacts to 54.4 acres of waters of the U.S. and 28.6 acres of temporary impacts. Although it represents a reduction of over 10 percent of renewable energy that would be available, it would still significantly contribute to assisting SDG&E in meeting its renewable energy requirements and would contribute California's goal for reducing greenhouse gases, although it would not maximize this opportunity. This alternative would meet the overall project purpose. The Applicant also determined that this alternative was practicable. Although it results in an increase in cost per KW, the Applicant believes that the increased cost will still allow for the generation of electricity that can be sold to a regulated utility at an acceptable price and to allow for the obtainment of necessary financing. It allows the project to meet the logistical constraints. Because this project significantly reduces impacts to aquatic resources, the Applicant believes that this alternative is the LEDPA.

The Corps' Wash Avoidance Alternative 1 would allow for the generation of 606 MW of utility grade electricity. It would result in permanent impacts to 38 acres of waters of the U.S. and 12.5 acres of temporary impacts. It is not practicable as it would not allow the Applicant to meet its project purpose as it would result in a 19% reduction in the amount of energy generated and would significantly reduce the project's ability to assist SDG&E in meeting its Renewable Energy Portfolio requirements and to assisting SDG&E and the State of California in reducing greenhouse gas production. Therefore, this alternative does not meet the overall project purpose. This alternative is also not practicable in terms of cost as it would significantly increase the cost of generating electricity per KW to a level which would preclude the projects ability to sell the electricity to a regulated utility and to obtain necessary financing.

Similarly, Corps Wash Avoidance Alternative 2 would allow for the generation of 438 MW of electricity resulting in 36.7 acres of permanent impacts and 10.4 acres of temporary impacts to waters of the U.S. This alternative would not be practicable for the same reasons as the Corps' Wash Avoidance Alternative 1.

The No Fill alternative would not allow for the construction of a utility grade solar project and would therefore not meet the project purpose.

10. Q. Based on these results, has the Applicant taken any actions?

Yes. Based on the determination that the proposed project could be modified to significantly reduce impacts to aquatic resources, the Applicant has informed the Corps that it is seeking authorization to construct the modified project design. The Applicant is currently working with the Corps to determine if the Corps concurs with the Applicant's practicability analysis.

The Applicant has also engaged Dr. Chang to evaluate this modified project design to qualitatively assess the reduction in on and off site sediment transport and resulting impacts. Dr. Chang's scope also includes making design recommendations for constructing the project perimeter fence across waters of the United States to minimize or eliminate impacts to aquatic resources entering and exiting the site.

11. Q. Does this complete your direct testimony?

Yes.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010

Date

A handwritten signature in black ink, appearing to read "Mike Fitzgerald", written in a cursive style.

Mike Fitzgerald

SUPPLEMENTAL PREPARED TESTIMONY
OF
REBECCA APPLE
CULTURAL RESOURCES

1. Q. Are you the same Rebecca Apple that submitted prepared testimony in this matter on March 15, 2010?

Yes and my resume submitted as part of the Applicant's Prehearing Conference Statement is still valid.

2. Q. What is the purpose of your testimony?

The purpose of my testimony is to provide supplemental information regarding the cultural resource investigation that has been completed to date on the site, to assess the significance of the resources found on the site, describe potential impacts to such resources, and describe potential mitigation measures.

3. Q. Please describe the cultural resource investigation that has been completed to date.

URS has conducted complete cultural resources surveys of the project sites and linear facilities. As reported in the Class III report (Nixon et al. 2009), 361 archaeological sites and 13 built resources were identified and recorded. Archaeological resources include 237 prehistoric, 70 historic, and 54 dual component/indeterminate sites. Prehistoric site types include lithic and/or ceramic scatters, trails, and scatters of artifacts and fire affected rock. Historic period sites include refuse scatters, benchmarks (survey markers), and roads. The dual component sites are typically historic refuse and lithics, while the indeterminate sites are rock features. Built resources include canals, railroads, gravel mining areas, and the Plaster City Plant.

4. Q. Have you made any conclusions regarding the significance of the cultural resources?

Based on investigations to date, recommendations for site eligibility have been provided in the Class III report (Nixon et al.) Eleven archaeological sites are recommended eligible and another 49 are potentially significant and additional data collection has been recommended. None of the built resources are recommended eligible.

5. Q. Please discuss potential impacts and mitigation measures.

As described in my previous testimony, consultation among the BLM, State Historic Preservation Office, the Advisory Council on Historic Preservation, the CEC, the National Park Service, and the Applicant is ongoing. Representative of Native American Tribes and interested members of the public ("invited consulting parties") have also been invited to participate in the consultation process. The consultation process has resulted in the development of a draft Programmatic Agreement which sets forth the procedures for how impacts to cultural resources will be addressed. The draft PA was distributed to the consulting parties and invited consulting parties for review and comment. It is currently anticipated that a final PA will be executed on or before August 25th, 2010.

The PA will guide cultural resources compliance efforts for the project. The PA calls for the preparation of a Historic Properties Treatment Plan (HPTP), an umbrella document similar to the Energy Commission's Cultural Resources Monitoring and Mitigation Plan (CRMMP), that will lay out the mitigation measures to address project effects to resources eligible for the National Register of Historic Places and the California Register of Historical Resources. It will also include regions contexts and an archaeological research design. Documents that will be prepared as part of the HPTP include a Monitoring Plan and a Discovery Plan. Because the PA is also addressing CEC mitigation requirements, provisions for these have been included in the document, specifically Appendix B.II Coordination with CEQA. This section describes the standards that will be used in determining what the appropriate mitigation measures for sources will be.

6. Q. Do you believe that implementation of these mitigation measures will reduce impacts to cultural resources to a less than significant level?

The measures will reduce a majority of the impacts to cultural resources to a less than significant level. However, some of the potential impacts such as impacts to the portion of the De Anza Trail Corridor that runs through the project site as well as visual impacts to sites such as mountains important to Native American tribe are difficult or impossible to mitigate. Therefore, it is likely that the project will still have significant impacts to cultural resources after all feasible mitigation measures are implemented.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010
Date

Rebecca Apple
Rebecca Apple

REBUTTAL AND SUPPLEMENTAL PREPARED TESTIMONY
OF
SETH HOPKINS
Land Use
Visual Resources

1. Q. Are you the same Seth Hopkins that submitted testimony in this proceeding on March 15, 2010?

Yes. My resume, submitted in Applicant's Prehearing Conference Statement, remains valid.

2. Q. What is the purpose of your supplemental testimony?

My testimony responds to public comments and agency concerns regarding the land use and visual resource implications of the Imperial Valley Solar Project.

3. Q. Are you sponsoring any exhibits?

Yes, I am sponsoring exhibit 26, the Juan Batista de Anza National Historic Trail visual impact analysis.

4. Q. The Staff Assessment/Draft Environmental Impact Statement raised concerns regarding potential impacts to recreational lands administered by the BLM. What are your comments regarding these concerns?

The SA/DEIS concluded that "the conversion of approximately 6,500 acres of land to support the proposed project's components and activities would directly disrupt current recreational activities in established federal, state, and local recreation areas and would result in adverse effects on recreational users of these lands." (Page C.8-1)

The proposed project would not directly affect any *established* federal, state and local recreation areas. The project site does not contain any developed public recreational areas or facilities on federal lands (there are no BLM-designated campsites or points of interest located on the project site), and therefore no developed recreational areas would be directly affected by development of the proposed project.

Established recreational areas adjacent to the project site, including the Yuha ACEC on the south and the Plaster City Open Area on the north, would not significantly be affected by the proposed project, as described below.

According to the 1985 Yuha Desert Management Plan, the Yuha ACEC was nominated for wildlife and cultural resource values. The management plan states that due to the area's limited scenic quality, most sightseeing near the project site is associated with specific points of interest (e.g., Yuha Wells, Yuha Shell Beds, Crucifixion Thorn Natural Area). The proposed project will not affect the recreational use of the ACEC for recreational site specific sightseeing values within the ACEC. Six campsites and four points of interest are located within the Yuha ACEC; the proposed project would not disrupt usage of these existing developed recreational areas.

The proposed project would also not disrupt the highly intensive existing recreational uses within the Plaster City Open Area.

The BLM's CDCA Plan designates BLM lands within the project site as Multiple Use Class I, (Limited), which allows for low to moderate intensive recreational activities. Permitted recreational activities that would no longer be allowed on the proposed project site include: backpacking, primitive, unimproved site camping, hiking, horseback riding, rock hounding, nature study and observation, photography and painting, rock climbing, spelunking, hunting, land sailing on dry lakes, and non-competitive vehicle touring and events only on "approved" routes of travel. Therefore, the proposed project would preclude dispersed, undeveloped recreational activities associated with off-highway vehicle travel on designated routes occurring on federal lands. Due to the abundance of recreational opportunities in the immediate area of the project and the regional area the adverse impact of eliminating recreational opportunities from 6,140 acres of public lands within the boundary of the project site would be considered insignificant.

The SA/DEIS also states on page C.8-1 that the proposed project would result in significant and unavoidable impacts associated with the disruption of recreation lands and non-compliance with the Imperial County Land Use Ordinance for portions of the site zoned S-2, I do not agree with this conclusion. As discussed above, the project would not directly or indirectly disrupt activities in established federal, state, or local recreation areas and/or wilderness areas or substantially reduce the scenic, biological, cultural, geologic, or other important factors that contribute to the value of federal, state, local or private recreational facilities or wilderness areas.

Upon commencement of construction, the public would not have access in the project site. However, the public would continue to have access to the numerous recreational areas in the regional areas of the project listed in Land Use Table 1. Hence, construction of the proposed project would result in less-than-significant impacts related to recreational facilities and recreational opportunities.

In addition, the project site is not a designated location for specific recreational uses but provides a limited amount of dispersed, undeveloped recreational opportunities. Although the proposed project would preclude existing recreational opportunities from the project site, the impact would be insignificant because the proposed project would comply with the CDCA Plan listing establishment of a solar facility as an allowable use within the project site.

Operation of the project would limit access to the project site for continued recreational use within the project site since the project site would be fenced off and developed for solar one and south of the project site, to other regional parks and to other recreational areas. Current use of the Yuha ACEC and Plaster City OHV area by the public for recreational activities would continue. Although operation of the proposed project would impact dispersed recreational opportunities by limiting access to the project area, it would not be significant since the community would still have access to the surrounding open spaces listed in Table 1. Therefore, the proposed project would result in less-than-significant impacts related to recreational facilities.

No designated recreation sites exist within the Imperial Valley Solar facility site. The BLM lands within and surrounding the proposed project are used by the public for hunting, off-road vehicle use on approved routes of travel, rock and mineral collecting, and sightseeing (associated with historic, geologic, archeological and botanical resources). These parcels do not contain any established recreational facilities by the county, state, or BLM. The NAP private lands surrounded by the project area are designated by Imperial County as S-2 Open Space Preservation, which can be used for recreational, limited residential and commercial uses, and some energy production uses including solar power.

The SA/DEIS also states on page C.8-6 and C.8-15 that "The wilderness areas closest to the proposed project site are the Yuha ACEC which is adjacent to the southern boundary of the project site . . ." The Yuha ACEC, however, is not a congressionally designated wilderness area, nor is it a wilderness study area with wilderness characteristics.

5. Q. Does the BLM agree with these conclusions?

During the March 22, 2010 Energy Commission Staff Workshop and BLM Public Meeting on the SA/DEIS for the Imperial Valley Solar Project, it was indicated by Daniel Steward that there is a distinction between authorized permitted recreational uses and unauthorized passive recreational uses. On the Project site, unauthorized passive recreational uses are occurring, mainly related to OHV use. The BLM has indicated that there is a distinction, and that no designated recreational areas or developed recreational facilities exist on site. Any recreational use by OHVs is limited to designated open routes that traverse the Project site. Any other OHV use of the site is unauthorized, illegal and unplanned. Therefore, impacts to these uses are less than significant.

6. Q. Do you believe the proposed project will result in significant cumulative impacts to recreational resources?

No, I do not. I believe the amount and quality of recreational resources being displaced are relatively small compared to the opportunities that exist in the region.

7. Q. Currently the SA/DEIS restricts project construction to limited daylight hours. Do you believe that allowing construction activities to occur 24 hours/day is consistent with Imperial County LORS?

Yes. The County has processes that allow the review of specific nighttime construction activities during the course of project construction and the granting variances when appropriate. The County of Imperial has allowed some construction activities to be carried out at night on other projects according to certain conditions under a variance. Under a variance granted by the County, nighttime activities of the Imperial Valley Solar Project would satisfy the requirements of the General Plan and noise ordinance. We request that the Commission allow some construction activities to be carried out under a similar process.

8. Q. During the workshop on the project, concerns were raised by a member of the public regarding potential impacts of the project on operations of the U.S. Border Patrol. Are you aware of any concerns of the United States Border Patrol regarding this project?

We have discussed the project with the US Border Patrol. Although the Border Patrol cautioned that they would like to keep their concerns and the details of security suggestions confidential, I can summarize their concerns as follows:

- a. The Border Patrol would like to make sure they have access to the site when required,
- b. The Border Patrol approves of the use of high fences, security cameras and the presence of security personnel on site.

9. Q. Have you reviewed the Glint and Glare study prepared by Power Engineers?

Yes. I have read the report and discussed its analysis and conclusions with the authors.

10. Q. What are your conclusions on the necessity of a fence or other visual barrier to mitigate for impacts associated with glint and glare?

After reading the study, I conclude that the 20 foot tall fence or other visual barriers are not necessary to mitigate any rare impacts associated with glint and glare from the SunCatchers.

11. Q. Does this change your conclusions regarding the potential for significant adverse visual impacts to some individuals viewing the project?

No, the Imperial Valley Solar Project is still likely to represent significant adverse impacts to some viewers related solely to the size and visual dominance of the project irrespective of glint and glare effects.

12. Q. Do you believe that the California Energy Commission should consider an "override" for Land Use and Visual impacts?

Yes. From a Land Use perspective, I believe the chosen site is suitable, even ideal, given the unprecedented size and scale of the Imperial Valley Solar project. However, I understand how others may determine that a large solar facility does not fit within the definition of an "allowed use". This is a more of a legal issue than an environmental one. Personally I do not believe the visual impacts resulting from the project outweigh the potential benefits of the project; however I understand that others may disagree. I believe that the visual effects of the project may be seen as positive by some, such as myself, who would appreciate using this land for renewable energy production instead of passive OHV use. I believe caution dictates making the override determination.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

5/10/2010
Date

Seth L Hopkins
Seth Hopkins

SUPPLEMENTAL PREPARED TESTIMONY
OF
JASON PFAFF
Visual Resources

1. Q. Are you the same Jason Pfaff that submitted testimony on March 15, 2010?

Yes. My resume, submitted in Applicant's Prehearing Conference Statement, remains valid.

2. Q. Did you complete the Glint and Glare study?

Yes. As discussed in my prepared testimony, Power Engineers conducted this study at the request of the Applicant. CEC staff commented on the tasks performed as part of this study. I am sponsoring this Glint and Glare study, exhibit 25.

3. Q. Please describe the process you went through in developing exhibit 25?

POWER used the following steps in the Glint/Glare study;

1. *Identify Potential Glint and Glare Issues*— POWER identified Key Observation Points (KOPs) where glint and glare may be an issue. Photography was taken from different KOPs around the Imperial Valley Solar Project site, and GPS locations and camera information were recorded. 7 KOPs were identified, including motorists on Interstate 8.
2. *Characterize* – POWER worked closely with Tessera Solar and Stirling Energy Systems (SES) to develop accurate computer simulations of SunCatcher™ operations. The POWER team traveled to the Maricopa Solar Project site to observe and characterize the conditions in which glint and glare may be produced and validate the computer simulation process.
3. *Evaluate* – Visual analysts studied the simulated project under different operation modes and lighting conditions, and at different times of the year. These simulations were used to evaluate and document when glint, glare and flashing effects may be visible to KOPs, and to determine if a 20-foot fence or berm will reduce the occurrence of these effects. POWER reviewed simulations to evaluate the potential visibility of glint and glare to the KOPs. Simulation results were then validated with observations at the Maricopa Solar site. Results
4. *Mitigate* – POWER developed recommendations to mitigate the visibility of glint and glare to KOPs (see Section 1.5).

4. Q. What are your conclusions?

Our conclusions were:

Glint/Glare - A 20' fence will provide minimal screening for all SunCatcher operations studied.

- Glint - During normal operations and when a SunCatcher™ is tracking the sun, glint will not be visible to offsite viewers. By design, the parabolic mirror focuses light to the PCU, which blocks all direct reflections of the sun, regardless of viewer position, season or time of day.

- Glint may occur when a SunCatcher™ is in an off-axis position. During morning and evening hours when the sun is low on the horizon, viewers looking east (evening views) or west (morning views) may experience glint from these conditions (up to 30 minutes).
 - In all KOPs reviewed, a 20-foot fence would have little or no benefit to block the effects of glint during off-axis situations. The location of the glint, high in the parabolic mirror could be visible to KOPs over the top of the 20-foot fence.
 - Simulations determined if the offset track position was moved from 10 degrees to 25 degrees, glint would be eliminated in most of these situations
- Glare – Glare will be visible during normal operations. This effect is experienced from the back and side of a SunCatcher™ when looking into the PCU. Simulation review determined a 20-foot fence would provide minimal blocking benefits and was not recommended as mitigation.

Flashing Effects - In certain, very rare conditions, a flashing effect may be experienced by motorists in their peripheral vision, outside their focused vision. Due to the location of the glint, high on the parabolic mirror, a 20-foot screen fence or berm in its proposed location would provide minimal glint screening.

- Flashing effects to motorists were determined to occur only where consecutive rows of SunCatchers™ are in an offset tracking position, moving from one dish to the next. Offset tracking conditions in the morning or evenings may produce this result.
- In all KOPs reviewed, a 20-foot fence or berm would have little or no benefit to block the effects of glint during offset tracking situations (approximate 1-5% reduction in the duration of glint). However, study of transportation animations determined if the offset track position was moved from 10 degrees to 20-25 degrees, glint would be eliminated in most of these situations

Overall, we concluded that a 20 foot high berm or fence would provide only minimal benefits. Our conclusions and recommendations are contained in exhibit 25.

5. Q. Please describe your recommendations.

We made the following recommendations:

- a. Move the offset tracking position from 10 degrees to a position of 25 degrees,
- b. Position the Suncatchers in the 25 degree tracking position several minutes prior to sunup,
- c. Position the Suncatchers into the night stow position after sundown, and
- d. Develop an emergency Glint Response Plan.

6. Q. Does that complete your testimony?

Yes.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

5/10/2010

Date

A handwritten signature in blue ink, consisting of the name "Jason" followed by a stylized, circular flourish.

Jason Pfaff

PREPARED SUPPLEMENTAL TESTIMONY
OF
TRICIA WINTERBAUER
Hazardous Materials

1. Q. Are you the same Tricia Winterbauer that submitted testimony in this proceeding on March 15, 2010?

Yes. My resume, submitted in Applicant's Prehearing Conference Statement, remains valid.

2. Q. Are you responsible for the hazardous materials analysis of the increased hydrogen amounts on the Imperial Valley Solar site?

Yes.

3. Q. What analysis did you perform?

The details of the centralized hydrogen system have evolved over time. The amount of hydrogen stored for each SunCatcher will be increased from 3.4 to 11 standard cubic feet (scf) which would accommodate PCU's operation. The Project consists of up to 31,200 SunCatchers and will use hydrogen gas as the working fluid in the PCU. Because of the hazardous nature of hydrogen there is a risk that it may cause an offsite consequence upon uncontrolled release. The Project conducted an offsite consequence analysis (OCA) for a worst case scenario release to evaluate the potential hazard posed by the hydrogen at the Project Site. It is important to note that the OCAs for the Project provide conservative evaluations for accidental hydrogen releases. The OCAs were performed following the methodology provided in the RMP guidance (U.S. EPA 1999).

4. Q. What are your conclusions?

OCAs were performed using the EPA approved RMP*Comp modeling program and confirmed through RMP OCA Guidance calculations. The purpose of conducting these OCAs was to evaluate any potential offsite hazards that may occur from the storage and use of hydrogen at the Project Site.

The maximum potential extent of impact in the event of a worst-case release from the largest vessel (hydrogen storage tank), as defined by the RMP OCA Guidance, would be equivalent to 0.06 mile. However, in the event of the worst case scenario induced from cumulative releases at the site, the maximum impacted distance is 0.3 mile. These distances are derived from an unrealistic hypothetical situation where all potential hydrogen present at the Project Site participates in a vapor cloud explosion. Results from the OCA modeling demonstrated that an accidental release of hydrogen, under conservative worst-case scenario conditions, will not impact the public or environmental receptors in the vicinity of the site.

I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010

Date

Tricia Winterbauer

Tricia Winterbauer

PREPARED SUPPLEMENTAL TESTIMONY
OF
SEAN GALLAGHER
Override

1. Q. Are you the same Sean Gallagher that submitted testimony in this proceeding on March 15, 2010?

Yes. And my resume submitted in Applicant's Prehearing Conference Statement remains valid.

2. Q. Are you sponsoring any exhibits?

Yes. Exhibit 36 provided with this submittal. This exhibit is a compilation of letters of support for the project. It is important to recognize that this project has widespread support on a local, state and national level. The letters are from Senator Dianne Feinstein, Governor Arnold Schwarzenegger, State Senator Denise Ducheny, Assemblyman Manuel Perez, Chairman of the Imperial County Board of Supervisors Wally Leimgruber, CEO of the El Centro Chamber of Commerce Cathy Kennerson, President and CEO of the Imperial Valley Economic Development Corporation Tim Kelley, and SDG&E Senior Vice President James Avery.

3. Q. Will you summarize the nature of the support expressed in these documents?

Overall the letters express support for the Imperial Valley Solar project for the contributions that it will make to economic development in Imperial County, and for its contributions to California's Renewable energy and Climate Change goals. The letters from local leaders emphasize the significant contribution the Imperial Valley Solar Project will make in providing jobs and economic stimulation for Imperial County. The letters from state leaders and Senator Feinstein additionally express support for the project for its contributions to California's renewable energy requirements and climate change goals..

4. Q. How do these documents relate to the overall findings the Commission is requested to make in approving the project?

These documents demonstrate that a variety of policy makers recognize the economic and environmental significance associated with developing the Imperial Valley Solar Project, and support the development of the project for these reasons.

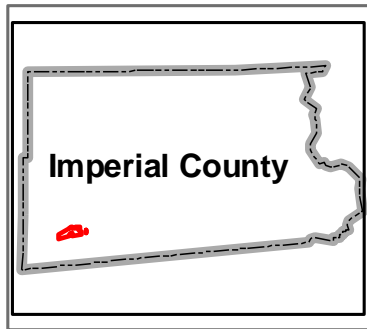
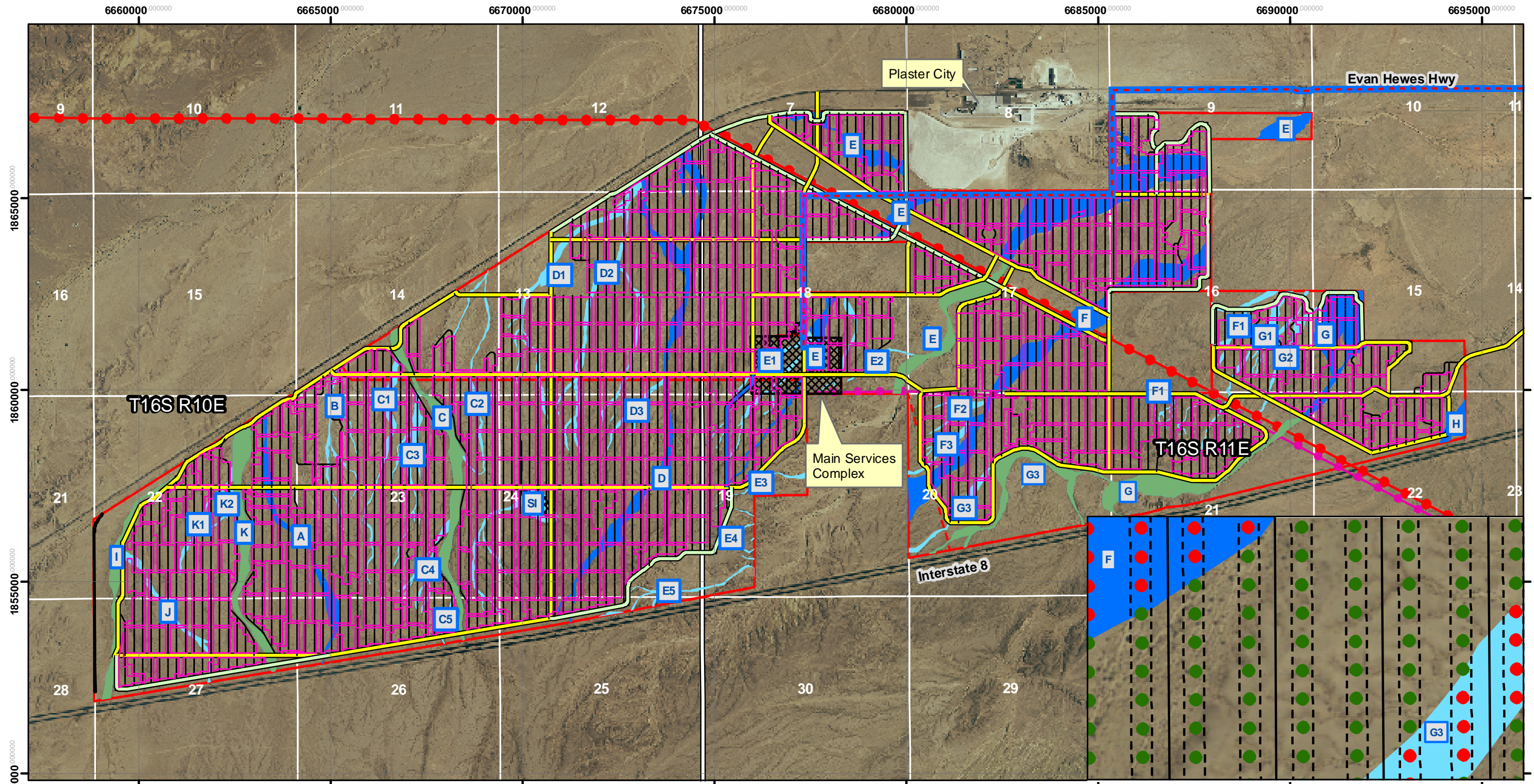
I swear under penalty of perjury that this testimony is true and correct to the best of my knowledge.

May 10, 2010

Date


Sean Gallagher

Exhibits



Imperial Valley Solar Project
Imperial County, CA
 Applicant's Wash Avoidance Site Plan
 April 14, 2010






Perimeter Road	Transmission Line	Suncatcher 4/10/2010
Arterial Road	Water Line	Suncatcher in Wash
Maintenance Road	Generator Group	Primary Wash
Utility Trench	Avoided Wash	Secondary Wash

0 1 2
Miles



LEGEND

-  Seeley Waste Water Reclamation Facility Limits
-  Proposed Waterline (3.8 Miles On-site, 8 Miles Off-site)
-  Waterline 10 foot ROW (10 acres Off-site)

Seeley Waste Water Reclamation Facility Limits



← **To IVS Project Site (Approximately 9 Miles)**

Main

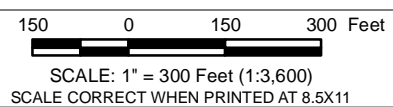
New River

Evan Hewes



SOURCES: Seely Water Treatment Plant (Dudek, 2010), Feb. 2009); Aerial Imagery (NAIP, 2005); Waterline (Nolte 1/2010).

OVERVIEW OF THE SEELEY WASTE WATER RECLAMATION FACILITY PROJECT LIMITS AND THE IMPERIAL VALLEY SOLAR PROJECT



CREATED BY: PM	DATE: 5-10-10
PM: AL	PROJ. NO: 27657103.00100

FIG. NO: **1.1**



GOVERNOR ARNOLD SCHWARZENEGGER

August 7, 2009

The Honorable Steven Chu
Secretary of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Re: Imperial Valley-Solar Two Project Application for Energy Loan Guarantee (DE-FOA-0000140)

Dear Mr. Secretary,

I am writing to encourage your support of funding for the above referenced project, which will bring much-needed economic investment into California.

As our nation's largest state, California is an economic powerhouse that accounts for more than 13 percent of the nation's GDP – which makes our 11.2 percent unemployment rate all the more challenging. Now is the time to invest in the people of California by investing in their long-neglected infrastructure. California has an impressive legacy of being at the forefront of innovation, and that is the kind of action that will help pull the United States out of this economic recession.

My administration is committed to using Recovery Act dollars efficiently and effectively. The people of California have identified ways we can work together in four key areas that will stabilize and expand our economy: investment in our infrastructure, energy security, stabilization of the housing market and assistance to meet the needs of the medically indigent.

I take great pride in recommending funding for high-quality projects in California. The investment will have no greater return for our nation than in the Golden State.

Sincerely,

A handwritten signature in black ink, appearing to read "Arnold Schwarzenegger".

Arnold Schwarzenegger



United States Senate

WASHINGTON, DC 20510-0504

<http://feinstein.senate.gov>

August 27, 2009

The Honorable Steven Chu
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Secretary:

I write to request that you give serious consideration to the request submitted to the U.S. Department of Energy Loan Guarantee Program for Projects that Employ Innovative Renewable Energy – DE-FOA-000140- by Tessera Solar for their Plaster City, California solar plant.

Tessera Solar's Plaster City proposal will bring jobs and new investment to one of the most economically depressed parts of California. The construction and operation of these facilities will create an estimated 300 to 700 construction jobs as well as 160 high paying permanent jobs in the Imperial Valley. Though substantial in any area, this job growth is particularly important in Imperial County where unemployment has eclipsed 30 percent.

Furthermore, the proposed Plaster City project will be developed on lands that have been previously disturbed and are less environmentally sensitive than many of the other solar generation proposals in California. It is also one of only three solar projects proposed on federal land in California that is currently undergoing formal environmental review under the National Environmental Policy Act (NEPA).

Again, I urge your strong consideration of their request and look forward to being updated on its progress. If you have any questions or need additional information, please feel free to contact Devin Rhinerson of my Washington, D.C., staff at (202) 224-3841.

Sincerely,

A handwritten signature in black ink that reads "Dianne Feinstein". The signature is fluid and cursive, with the first name "Dianne" being larger and more prominent than the last name "Feinstein".

Dianne Feinstein
United States Senator

DF:dr

COMMITTEES
CHAIR, BUDGET AND FISCAL REVIEW
VICE CHAIR, AGRICULTURE
CHAIR, JOINT LEGISLATIVE BUDGET
JOINT LEGISLATIVE AUDIT

California State Senate

SENATOR

DENISE MORENO DUCHENY

FORTIETH SENATE DISTRICT

SELECT COMMITTEES
CHAIR, CALIFORNIA-MEXICO
COOPERATION
CHAIR, COLORADO RIVER
CHAIR, OVERSIGHT OF THE
UC ENERGY LABS
BOARDS
CALIFORNIA WORKFORCE
INVESTMENT
STATE PUBLIC WORKS



August 31, 2009

The Honorable Steven Chu
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Secretary Chu:

I am writing to express my support for Tessera Solar and its Imperial Solar Two (Imperial Solar) application submitted to the Department of Energy. Imperial Solar plans to build in Imperial County, California using Stirling Energy Systems' SunCatcher Power System developed at Sandia National Laboratories.

As the California State Senator representing the entire Imperial County, I am supportive of projects such as Imperial Solar, which seek to improve the environmental and economic sustainability of the region and state. The construction of Imperial Solar will bring hundreds of jobs to Imperial County at a time when the county is currently experiencing a 30% unemployment rate. For this reason alone, I strongly support this application and encourage the Department of Energy to award Imperial Solar the loan guarantees necessary to ensure its development.

Furthermore, Tessera Solar's use of Stirling Energy System's SunCatcher Power System means that Tier 1 automotive equipment companies will manufacture the equipment used to build Imperial Solar. In this way, Imperial Solar is the first of its kind in connecting a renewable energy company and automotive equipment manufacturers. The collaboration between the two industries can serve as an example of how the clean energy economy is helping those industries hardest hit by the current economic downturn to re-tool and grow in the 21st century.

Additionally, my constituents and my district will also reap the environmental benefits of Imperial Solar. By generating electricity during peak periods, Imperial Solar will help meet the region's energy needs without emitting criteria air pollutants or greenhouse gases. In this way, Imperial Solar is both reducing local air pollution and playing an important role in our community's efforts to grapple with climate change.

CAPITOL OFFICE
STATE CAPITOL, ROOM 609B
SACRAMENTO, CA 95834
TEL (916) 881-4040
FAX (916) 327-2522

CHULA VISTA OFFICE
437 3RD AVENUE, SUITE 411
CHULA VISTA, CA 91910
TEL (619) 409-7690
FAX (619) 409-7690

IMPERIAL VALLEY OFFICE
1224 STATE STREET, SUITE 211
EL CENTRO, CA 92243
TEL (760) 825-3442
FAX (760) 235-3444

COACHELLA VALLEY OFFICE
55-890 ENTERPRISE WAY, SUITE 18
COACHELLA, CA 92236
TEL (760) 398-6442
FAX (760) 348-8470

Secretary Chu

8/31/09

Page 2 of 2

Once again, I would like to reiterate my strong support for Tessera Solar's Imperial Solar project. The Imperial Solar project represents the economic development that our county, state, and nation need to flourish. I am hopeful that the Department of Energy and the Federal government provide the support necessary to ensure this project's development. Please feel free to contact me should you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Denise Moreno Ducheny". The signature is written in a cursive style with a prominent loop at the end of the last name.

DENISE MORENO DUCHENY

State Senator, 40th District

DMD/jmh

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0080
(916) 319-2080
FAX (916) 319-2180

DISTRICT OFFICE
45-677 OASIS STREET
INDIO, CA 92201
(760) 342-8047
FAX (760) 347-8704

Assembly
California Legislature



V. MANUEL PÉREZ
ASSEMBLYMEMBER, EIGHTIETH DISTRICT

COMMITTEES
CHAIR, ECONOMIC DEVELOPMENT,
AND THE ECONOMY
ACCOUNTABILITY AND
ADMINISTRATIVE REVIEW
HEALTH
VETERANS AFFAIRS

August 6, 2009

The Honorable Steven Chu
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

RE: U.S. Department of Energy's Loan Guarantee Program

Dear Secretary Chu:

I am writing to express my strong support for the full consideration of Tessera Solar's recently submitted applications to your Department's Energy Loan Guarantee Program for their Imperial Valley – Solar Two (Imperial Solar) project.

As a member of the California State Assembly representing both Imperial and Eastern Riverside Counties, I firmly believe that all projects which bring economic opportunities and job creation are vital to our local communities. The construction of Imperial Solar will bring hundreds of jobs to Imperial County at a time when they are most needed. Just last month, unemployment rates in this county reached the 27% mark. Tessera Solar has been, and continues to be, an active participant in our regional efforts to help prepare the local workforce for the emerging clean energy industries.

Furthermore, I would like to recognize the collaboration between Tessera Solar and Stirling Energy in this first of a kind partnership between two entities which have different areas of expertise but share the common goal of producing renewable clean energy. This project represents the kind of economic development that we so desperately need in the 80th Assembly District.

Again, thank you for your time and please feel free to contact me directly if you have any questions regarding this matter, I can be reached at 760-336-8912.

Sincerely,

A handwritten signature in black ink that reads "V. Manuel Pérez".

V. MANUEL PÉREZ
Assemblymember, Eightieth Assembly District

DISTRICT 1
VICTOR CARRILLO
940 MAIN STREET, SUITE 209, EL CENTRO, CA 92243

DISTRICT 2
JACK TERRAZAS
940 MAIN STREET, SUITE 209, EL CENTRO, CA 92243

DISTRICT 3
MICHAEL W. KELLEY
940 MAIN STREET, SUITE 209, EL CENTRO, CA 92243

DISTRICT 4
GARY WYATT
940 MAIN STREET, SUITE 209, EL CENTRO, CA 92243

DISTRICT 5
WALLY LEIMGRUBER
940 MAIN STREET, SUITE 209, EL CENTRO, CA 92243



Board of Supervisors
County of Imperial

BOARD OF SUPERVISORS
COUNTY ADMINISTRATION CENTER
940 MAIN STREET, SUITE 209
EL CENTRO, CA 92243-2871
TELEPHONE: (760) 482-4220
FAX: (760) 482-4215

July 14, 2009

Bob Lukefahr, President
Tessera Solar
1001 McKinney, Suite 1730
Houston, TX 77002

Dear Mr. Lukefahr,


The Imperial County Board of Supervisors aggressively supports clean, renewable energy development within the County. Our goal for the region is to provide significant megawatts of renewable energy for the Southwestern United States.

The proposed Imperial Solar Two project by Tessera Solar would help achieve the County's objective to establish Imperial Valley as the nation's clean energy capital. The potential benefits from this 750-megawatt project to the Imperial County are extensive. As one of the first large central solar projects in our region, it will help establish the Imperial County as a viable location for solar development. In addition, it will generate millions of dollars into the local economy, create hundreds of new construction and permanent jobs, and provide tax revenue to local municipalities.

Based on information provided to the County Board of Supervisors, the Stirling Energy Systems SunCatcher is the most efficient technology to convert the sun's energy into clean electricity. The positive impacts of developing carbon free energy while utilizing very little water is a significant added benefit. As you know, water is an extremely precious commodity in the Imperial Valley.

Tessera Solar's proposed project is also consistent with the national policies for clean energy and reducing global warming. It is apparent to us that this is the type of solar development that would be appropriate for the US Department of Energy loan guarantee program.

Sincerely,



Wally Leimgruber
Chairman of the Board of Supervisors



**El Centro
Chamber of Commerce
& VISITORS BUREAU**

1095 South 4th Street
Post Office Box 3006
El Centro, CA 92244 - 3006
(760) 352-3681
Fax (760) 352-3246

September 4, 2009

Bob Lukefahr, President
Tessera Solar
1001 McKinney, Suite 1730
Houston, TX 77002

Dear Mr. Lukefahr,

The El Centro Chamber of Commerce & Visitors Bureau recognizes the benefits of solar energy development in the Imperial County and our Board of Directors has supported renewable energy as a viable industry to create quality jobs and economic development for our region.

The Chamber has been a strong supporter of Stirling Energy Systems and Tessera Solar, and the Imperial Solar Two plant being developed west of El Centro. We recognize the Tessera plant will provide numerous benefits for Imperial County. Foremost, is the creation of much needed jobs within our region. The Tessera solar facility will provide hundreds of construction jobs during its four years of development. In addition, there will be new, well-paying jobs that are needed to operate and maintain the solar energy plant.

The potential economic development impact from this project is estimated to be in the tens of millions of dollars. Furthermore, as one of the largest central solar generating facilities in the world, it will help to promote Imperial Valley as a leader in solar energy development.

I have been informed that Tessera Solar will submit the Imperial Solar project for a loan guarantee from the Department of Energy's America Recovery and Re-investment Act (ARRA). The Tessera Solar Imperial Plant is an ideal example of a project that supports

"Where the Sun Spends the Winter"®

www.elcentrochamber.com

the recovery of the U.S. economy by stimulating growth through investments in critical energy infrastructure.

The Chamber strongly endorses Tessera Solar Imperial Solar project for the loan guarantee plan. As I have already expressed, the job creation and economic development impact alone should qualify the project for approval by the Department of Energy. Furthermore, the Stirling Energy SunCatcher is the most efficient solar energy technology and uses virtually no water in its generation process. As you know, water in our desert community is a precious resource.

Imperial County has the ability to be a driving force in renewable energy development for the United States. The positive affects from clean energy on global warming and benefits to our environment are well documented. Tessera Solar Imperial plant has the ability to generate 750 megawatts of clean solar energy that would set the stage for our Valley to become the renewable energy capital for the nation.

The El Centro Chamber of Commerce & Visitors Bureau wants to reinforce its steadfast support for the Tessera Imperial Solar project and its request for the DOE loan guarantee plan. Thank you for your thoughtful consideration.

Sincerely,

A handwritten signature in blue ink that reads "Cathy Kennerson". The signature is fluid and cursive, with the first name "Cathy" being more prominent than the last name "Kennerson".

Cathy Kennerson, ACE
Chief Executive Officer



September 10, 2009

Bob Lukefahr
President
Tessera Solar
1001 McKinney, Suite 1730
Houston, TX 77002

Dear Mr. Lukefahr,

The Imperial Valley Economic Development Corporation (IVEDC) has been a strong supporter of solar energy development in the Imperial Valley for many years. It has identified renewable energy as one of its core industries and provides significant opportunities for economic development.

The IVEDC has worked closely with Stirling Energy Systems and Tessera Solar on the Imperial Solar Two plant being developed west of El Centro at Plaster City. We are very supportive of the plant and the benefits it will afford Imperial County. The potential for hundreds of jobs and millions of dollars into the Imperial Valley economy are extremely advantageous. Furthermore, as one of the country's largest central solar generating facilities, it will help to promote the Imperial Valley as a leader in solar energy development.

It has come to my attention that the Tessera Solar Imperial Solar project will apply for a loan guarantee from the Department of Energy's America Recovery and Re-investment Act (ARRA). The Imperial Solar Plant is a perfect example of a project that supports the recovery of the U.S. economy by stimulating growth through investments in critical energy infrastructure.

IVEDC adamantly endorses Tessera Solar Imperial Solar project for the loan guarantee plan. The potential jobs for the Imperial County, with unemployment more than double the national average, is justification for the approval by the Department of Energy. Furthermore, Stirling Energy SunCatcher is the most efficient solar energy technology and uses virtually no water in its generation process. Water in our desert community is extremely valuable.

There are numerous other reasons the DOE should award a loan guarantee to the Tessera Solar Imperial Valley project. The economic benefits will surpass the millions of dollars for payroll, local taxes, ancillary businesses and other local development. Virtually the entire SunCatcher will be built in the United States. The DOE should assess the entire production process and grant funds to those companies that provide the greatest economic stimulation in America.

Finally, the environmental benefits to the Southern California region are also immense. Tessera Solar Imperial plant has the ability to deliver 750 megawatts of clean solar energy to San Diego. Imperial and San Diego counties are one mega-region and the ability to displace tons of harmful emissions in the San Diego region benefits the environment, reduces global warming and improves the quality of life for all of Southern California.

The Imperial Valley Economic Development Corporation wants to reiterate the importance of renewable energy development in our region. We are uniquely positioned to provide clean energy from the most diverse sources – solar, geothermal, wind, biomass, biofuels and algae – and the Valley can deliver energy throughout the South Western US. The Tessera Solar Imperial Solar plant is an important part of our renewable energy development, critical to the fight against global warming and the economic recovery of the nation. We strongly encourage the Department of Energy to approve the loan guarantee for the Imperial Solar project.

Sincerely,



Timothy E. Kelley
President and CEO



James P. Avery
Senior Vice President
Power Supply

San Diego Gas & Electric
8330 Century Park Court, CP33A
San Diego, CA 92123-1530

Tel: 858.650.6102
Fax: 858.650.6106
JAvery@SempraUtilities.com

September 11, 2009

The Honorable Steven Chu
Secretary of Energy
United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Dr. Chu:

I am writing in support of Tessera Solar and its application to the Department of Energy Loan Guarantee program under solicitation DE-FOA-0000140 for the Imperial Valley Solar project (SES Solar Two, LLC).

SDG&E is taking a nationwide leadership role in the pursuit of renewable power. Our company has made a voluntary commitment to obtain 33% of its electric power requirements from renewable resources by 2020, and the Tessera Solar project will be a critical part of that commitment. Tessera's ability to obtain a Loan Guarantee from the Department of Energy will greatly help to make this project a reality.

I wish to confirm that San Diego Gas & Electric Co. (SDG&E) intends to purchase power from Imperial Valley Solar (SES Solar 2, LLC) under a 20 year Power Purchase Agreement for a minimum of 300MW (and up to 750MW) of installed capacity beginning in 2010. Our company is working with Tessera Solar to redraft our existing PPA to reflect the new build schedule, new pricing that will reflect current market conditions and support deployment of the technology, and to bring the PPA into compliance with current California law. We expect to complete this redrafting shortly and submit the revised PPA to the California Public Utility Commission for its review and approval.

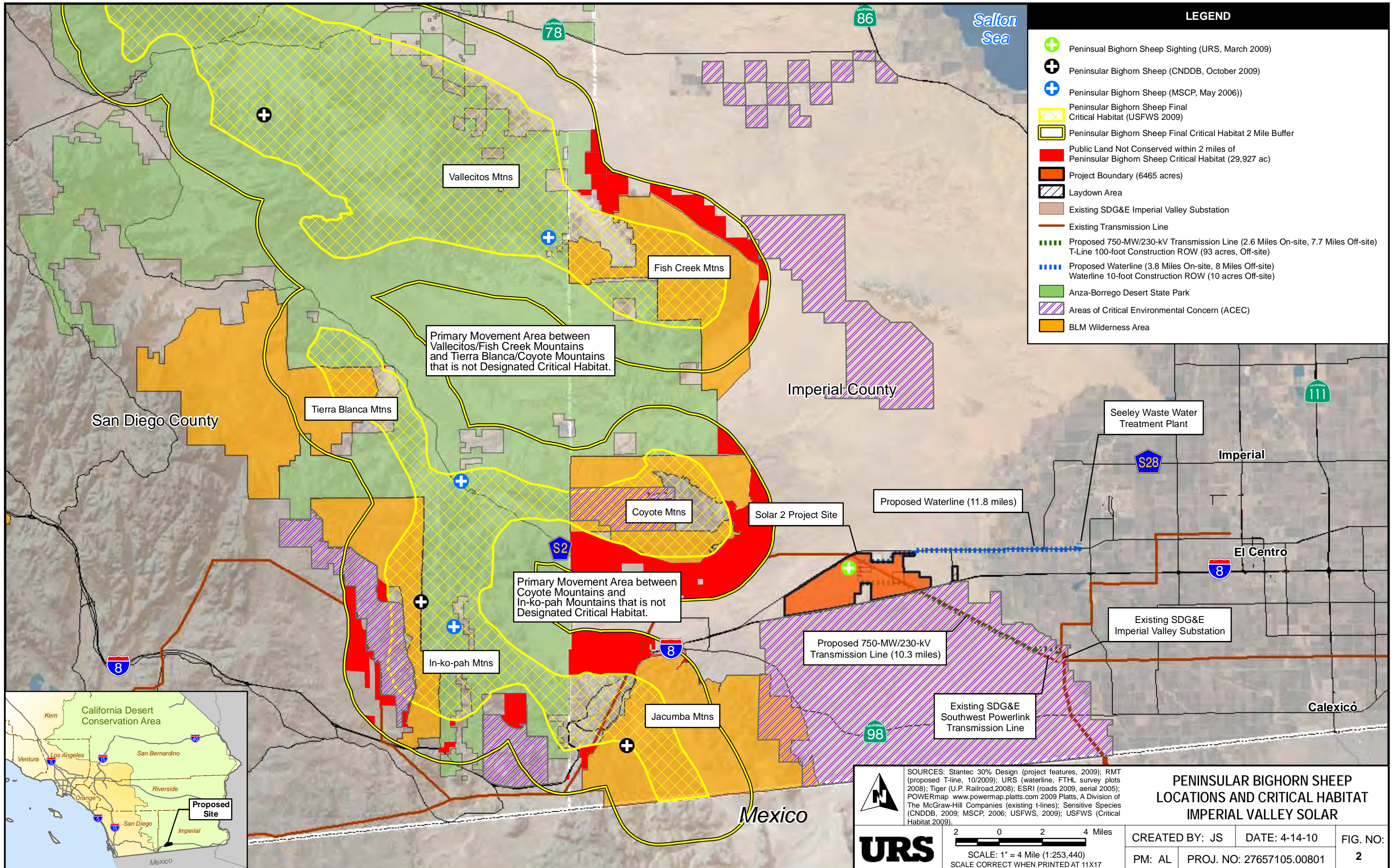
While SDG&E is enthusiastic about this project and about the SunCatcher technology, I must also note that the above facts represent our current intention and do not represent a binding commitment on behalf of SDG&E until such time as the PPA is negotiated and completed and the CPUC has approved the contract.

Sincerely,

A handwritten signature in black ink, appearing to read 'James P. Avery', is written over a horizontal line. The signature is fluid and cursive.

James P. Avery

/rn



Resumes

Areas of Expertise	<p>Hydrogeology/Geochemistry Groundwater Availability Studies Aquifer Testing and Analysis Project Management Phase I and II ESAs Remedial Investigations/Feasibility Studies Site Remediation Laboratory QA/QC</p>
Total Years of Experience	23
URS	21
Other Firms	2
Education	<p>Graduate Course Work/1986-1988/Hydrogeology/Syracuse University MS/1985/Geology (cum laude)/Pennsylvania State University BS/1982/Geological Sciences (summa cum laude)/State University of New York at Albany</p>
Registration/Certification	<p>2001/Hydrogeologist/California, C.Hg. No. 734 1996/UST Consultant/Arizona, No. 1218 1995/Geologist/Arizona, R.G. No. 29659 1992/Geologist/California, P.G. No. 5334</p>
Overview	<p>Mr. Scott is a California-registered Professional Geologist (P.G.) and Certified Hydrogeologist (C.Hg.) who has been involved in a variety of environmental and water resource projects in San Diego, Southern California and Arizona for over 20 years. He has successfully provided consulting services to government and private clients. In addition, he has assisted clients with public participation, presented information to the public in layman’s terms and served as an expert witness. Mr. Scott’s management style has been effective in developing project teams, as well as being a key player on them. He currently serves as the division manager for the Site Assessment and Remediation Group in URS’ San Diego office, project manager and principal-in-charge for several programs and projects. Some of his directly relevant experience addressing groundwater quality and supply is detailed below.</p>
Project Experience	<p>Tessera LLC, Solar Two Site, Plaster City, California. Assisted project team by serving as the groundwater expert in addressing water supply data requests for the Application for Certification (AFC). Performed a groundwater availability study that involved siting and installing a test well to 300 feet to identify the quantity and quality of water at the site for potential use during construction and operation.</p> <p>Tessera LLC, Solar One Site, west of Ludlow, California. Assisted Tessera staff by conducting a desktop study to identify the presence of existing wells and water quality data readily available for site area. Services included identifying the potential locations for water supply wells and preparing a scope of work to install a water well to serve as water supply during construction and operation. Assisted in addressing California Energy Commission (CEC) data requests. He will be providing technical oversight for the installation of a water supply well and associated aquifer testing. He is also providing aquifer testing services for an existing water well.</p>

Manzanita Indian Reservation, San Diego County, California. Managed a well installation and rehabilitation project to improve water supplies and quality. Evaluated groundwater resources, nitrate source identification, installation of two potable supply wells, prepared a wellhead protection plan, conducted aquifer testing, and provided recommendations for replacement and rehabilitation of existing water wells on the Reservation.

San Joaquin 1&2 Solar Hybrid Facility, Coalinga, California. Assisted in preparation of the AFC and addressing CEC data requests related to groundwater availability and supply. Served as expert to oversee aquifer testing and well sampling and completion of Phase I and Phase II site assessment activities to address the presence of recognized environmental conditions at the proposed site.

Ausra Carrizo Energy Solar Farm, San Luis Obispo County, California. Served as groundwater/hydrogeology expert in addressing the availability and quality of groundwater beneath the site and potential affects of its water use might have on surrounding property owners. He prepared a report of hydrogeology based on limited existing data for the site vicinity and provided oversight of groundwater modeling by a third party expert. He attended and presented information at several public meetings and a hearing for an intervenor to demonstrate that the proposed water use for the facility would not impact its neighbors.

National City Well Field, National City, California. Provided hydrogeologic peer review for the design of two deep test wells in the San Diego Formation at the well field. Reviewed geologic and aquifer test data, and downhole geophysical logs.

Sweetwater Authority, SDF#7 Well Installation, Chula Vista, California. Provided peer review of groundwater data collected during and drilling of test boring for SDF#7 and provided oversight during limited aquifer testing conducted to estimate well yield for a new water supply well.

City of San Diego, As-needed Groundwater Contract, San Diego, California. Serves as peer reviewer for City groundwater projects that involve identification of possible potable groundwater sources, installation and aquifer testing of pilot wells.

Goodrich Aerostructures, Chula Vista, California. Mr. Scott is the Program Manager providing environmental consulting services for this facility located on San Diego Bay. Conducted a deep drilling program to characterize geologic conditions in the San Diego Formation to a depth of approximately 500 feet. Installed a production well to evaluate aquifer characteristics through conducting a 72-hour constant rate pump test and 24 hours of recovery. Evaluated resulting data and estimated vertical conductivity of the aquifer. Prior to conducting pump test, coordinated permitting activities with the City of Chula Vista and the Metropolitan Industrial Wastewater Program (MIWP) to obtain a permit to discharge pump test effluent to the municipal sewer system.

Meadow Valley Generating Project, Meadow Valley, Nevada. Assisted with peer review and evaluation of groundwater resources related to alluvial and Tertiary-age

basin-fill aquifers as a potential water source for a proposed power generating facility. The project involved aquifer testing and evaluation of possible affects groundwater extraction would have on springs, riparian habitat and connection to the regional carbonate aquifer.

Nursery Products, Hinkley, California. Hydrogeologist for an Environmental Impact Assessment for the construction of composting facility in the Mojave Desert. Installation and design of a water supply well is pending.

Professional Associations

San Diego County Department of Environmental Health, Brownfields Technical Work Group

EDUCATION/TRAINING

1989	Master's Degree, Ecology and Systematic Biology San Francisco State University.
1981	Bachelor's Degree, Ornamental Horticulture California Polytechnic State University, San Luis Obispo.
1990	Basic Wetland Delineation Training, Wetland Training Institute
1990	OSHA Hazardous Materials Worker 40-hour training
1994	Advanced Wetland Delineation, Wetland Training Institute

PROFESSIONAL EXPERIENCE

2001-present	Independent Biological Consultant, Walnut Creek.
1998-2001	Sycamore Associates LLC. Walnut Creek. Owner/Principal.
1992-1998	Independent Biological Consultant, San Francisco.
1989-1992	Ogden Environmental and Energy Services, San Diego and San Francisco.
1987-1989	Independent Biological Consultant, San Francisco.
1986-1989	Research Assistant, Instructor. San Francisco State University.

Mr. Wood has 20 years of experience performing field-intensive evaluations of wetland and upland habitats throughout California. His primary expertise lies in the fields of botany, wetland ecology and habitat restoration, performing and supervising botanical and wildlife surveys and wetland delineations, conducting impact assessments, developing, implementing and monitoring habitat restoration programs, and resource conservation planning.

Mr. Wood brings to his projects a wide range of expertise in vegetation ecology, soils and geology, fire ecology, wetland ecology, environmental policy and permitting, as well as experience conducting pre-Phase 1 hazardous site assessments. He has successfully assisted residential and commercial developers, federal, state and local governmental agencies, planners, and non-profit organizations in understanding and managing the constraints and opportunities posed by regulated biological resources. His strong technical background enables him to be an effective member within interdisciplinary teams.

Mr. Wood was a co-owner of a dynamic environmental consulting company in the East Bay. As a principal, Mr. Wood participated in all aspects of day-to-day business operations, including client relations, marketing, technical oversight, quality control, agency negotiation, hiring and training, and supervising a staff of 20 employees and numerous subconsultants.

Mr. Wood has worked throughout California, Oregon, Hawaii, and Guam. He is also familiar with the vegetation and wildlife of western Europe, East Africa, Australia, Mexico, Argentina, and the Malaysian peninsula. He is fluent in German and has a working knowledge of Spanish. Mr. Wood is the developer of CalBiota, the first comprehensive electronic database of California's plants, wildlife, insects, lichens, and fungi developed specifically for use by biological consultants.

Mr. Wood regularly teams with associates providing specialized expertise in environmental permitting and regulatory compliance, mitigation, CEQA/NEPA, endangered and other special-status wildlife species, anadromous fish and aquatic resources, entomology, construction and long-term monitoring, and arboriculture. Mr. Wood has extensive experience conducting botanical surveys in the California deserts. Including studies for transmission lines, military base studies, and solar power generation facilities. In 2008, he participated in multi-season floristic surveys across the Mojave Desert for the CalNev pipeline project between Las Vegas and San Bernardino.

MIKE FITZGERALD, PRINCIPAL/ENVIRONMENTAL SCIENTIST

776 E. Second Ave. • Durango, CO • fitz@ecosphere-services.com • 970.382.7256 (p) • 970.382.7259 (f)

QUALIFICATIONS SUMMARY

Mike Fitzgerald successfully leads the Ecosphere team as both owner and program manager. He joined Ecosphere in 1996 as a project manager and acquired the business in 1999. Ecosphere has flourished under his guidance over the last decade, earning the firm a highly regarded reputation for conducting sound environmental science that clients can trust. He has managed thousands of environmental projects during his career, overseeing field investigations, coordinating project logistics, facilitating agency/client consultations, and successfully managing complex budgets.

Years experience: 19 Years with Ecosphere: 13

Areas of environmental consulting expertise:

- ◆ Environmental Compliance and Permitting, particularly National Environmental Policy Act (NEPA), Clean Water Act (CWA) and Endangered Species Act (ESA)
- ◆ Project Management
- ◆ Compliance Planning and Training Programs

Industry expertise:

- ◆ Renewable energy
- ◆ Extractive industries (oil & gas, mining)
- ◆ Electricity transmission and distribution

EDUCATION, TRAINING & PROFESSIONAL AFFILIATIONS/CERTIFICATIONS

B.A., Environmental Studies and Business Economics • University of California, Santa Barbara • 1987
National Association of Environmental Professionals
USACOE Recognized Qualified Wetlands Delineator
Endangered Species Permits in USFWS Regions 1, 2 and 6

PROFESSIONAL EXPERIENCE

Ecosphere Environmental Services, Principal/Environmental Scientist • Durango, CO
1996 to present (owner since 1999)

Dames & Moore, Inc. • Alaska • 1991 to 1995

U.S. Peace Corps - Philippines Forestry Program • 1988 to 1990

REPRESENTATIVE PROJECT EXPERIENCE

NEPA

- Program Manager for the Southern Ute Indian Tribe Growth Fund's Programmatic Environmental Assessment for the 80-acre Fruitland infill oil and gas development on Tribal land. The analysis anticipates new well drilling from existing and/or not yet drilled 160-acre, 320-acre spacing locations and from conventional wells.
- Project Manager for the Questar Southern Trails Pipeline Project (850) FERC NEPA environmental compliance contract. Responsibilities consisted of managing multiple

environmental and biological assignments, including planning project logistics, assigning field personnel, and conducting/participating in field surveys, reporting, NEPA document view and development of compliance plan, training presentations, monitoring and compliance reporting to FERC.

- Project Manager for the preparation of an EA for Amoco Production Company's proposed Horse Canyon Straddle Compression Project in San Juan County, New Mexico. The project consisted of four compressor stations and approximately 18 miles of natural gas pipelines of varying sizes. The project area spanned lands managed by the BLM, the State of New Mexico and private lands.
- Principal Investigator for Programmatic EIS for proposed Joint Military Training Exercises in Alaska for the Alaska Command and the U.S. Army Corps of Engineers. There were 67 ground sites and 8 airspace areas throughout Alaska. Responsible for fish and wildlife, and vegetation investigations, land status investigations, project mapping, impact analysis and report preparation.
- Project Manager providing multiple NEPA and regulatory compliance services to Desert Rock Energy, LLC in support of development of the proposed 1,500 MW coal-fired Desert Rock Energy Project power plant. Responsibilities include completed all biological sections of the EIS; preparing the project Biological Assessment; conducting Section 7 Consultation with the USFWS; acquiring a Categorical Exclusion for project data collection activities; conduct public involve plan; acquire project CWA Individual Permit; and other services.
- Project Manager for MAPCO natural gas pipeline project (450 miles) and the TransColorado natural gas pipeline project (250 miles) in Utah, Colorado and New Mexico. Conducted wildlife studies, threatened and endangered species (T&E) surveys, wetlands delineations, noxious weed surveys, raptor studies and impact analyses.
- Project Manager for the preparation of an EA for Public Service Company of New Mexico's (PNM) proposed Albuquerque Mainline Expansion Project in San Juan County, New Mexico. The project proposed expansion and construction of PNM's mainline from Blanco, New Mexico to Albuquerque. The project involved extensive coordination with the Bureau of Indian Affairs, the Navajo nation, and the BLM.
- Project Manager for the preparation of an EA for PNM's existing Deza Bluffs Microwave Radio Tower in McKinley County, New Mexico. The EA was prepared for the BIA Navajo Area Office Gallup in order to renew a lease agreement with the Navajo Nation for the continued use of a site atop Deza Bluffs.
- Project Manager for the preparation of an Environmental Assessment (EA) for the Burlington Resources' Marcotte #2 Deep Well Project in San Juan County, New Mexico. The Marcotte well was over 14,000 feet deep, drilled into the Pennsylvania Formation. The project consisted of coordinating a technical assessment of the proposed project, insuring regulatory compliance, and supervising Ecosphere staff project analysis. The EA was prepared on behalf of the Farmington District BLM.
- Project Manager for the preparation of an EA for the Burlington Resources' Payne #221 Access Road and Well Pad Project in San Juan County, New Mexico. The project required intensive analysis of impacts to four action alternatives on BLM administered land in the Farmington District, New Mexico.
- Project Manager for the preparation of an EA for a proposed 38-mile, 30 inch diameter, natural gas pipeline in Rio Arriba and San Juan counties, New Mexico. The project included acquiring necessary Clean Water Act (CWA) permits for the crossing of three rivers in the project area. The project area spanned lands managed by BLM, the BOR, the State of New Mexico and private lands. The client was Williams Gas Processing Co.
- Project Manager for the preparation of an EA for Amoco Production Company's proposed Horse Canyon Straddle Compression Project in San Juan County, New Mexico. The project consisted of four compressor stations and approximately 18 miles of natural gas pipelines of

varying sizes. The project area spanned lands managed by the BLM, the State of New Mexico and private lands.

- Project Manager for the preparation of an EA for Amoco Production Company's proposed Cedar Hill Pressure Reduction Project in San Juan County, New Mexico. The project consisted of approximately 6 miles of natural gas pipelines of varying sizes and project compression. The project area spanned lands managed by the BLM, the State of New Mexico and private lands.
- Project Manager for the preparation of two EAs for the U.S. Army Corps of Engineers, Mobile Alabama District for a proposed natural gas pipeline in San Juan County, New Mexico. The EA was prepared for the BIA, Gallup, New Mexico and the Navajo Nation Environmental Protection Agency. The proposed pipeline crossed Navajo allotment and leasee tracts.
- Prepared numerous EAs for the BIA for proposed oil and gas developments on Navajo Nation, Southern Ute Indian, Ute Mountain Ute, and Jicarilla Apache tribal lands in Colorado and New Mexico. Clients included Williams Gas Processing, Meridian Oil Production Company, Mallon Oil Company, and several smaller producers. BIA offices included the Gallup, NM, Dulce, NM, Ignacio, CO, and Towaoc, CO offices.
- Prepared EAs for Williams Field Services Company's proposed Kutz to Kutz Dakota 8-mile pipeline and their Hallwood Loop to Torre Alta Lateral 11-mile pipeline, both in San Juan County, New Mexico.
- Project Manager for EA and T&E species surveys of the proposed Hallwood Loop Reroute and Barker-Kutz Mainline Loop pipelines. The project as proposed was seventeen miles of pipeline, including two river crossings of the La Plata River, in San Juan County New Mexico. Client was Williams Field Services.
- Conducted surveys for Southwestern willow flycatcher habitat at seven riparian area crossings of the proposed Tiffany Enhanced Coal Bed Methane Project, on Southern Ute Indian Tribe lands in southwest, Colorado. The client was Amoco Production Company.
- Project Manager for T&E surveys and report preparation for Phase 1 of the Trans-Colorado Pipeline Project. Surveys were conducted through 25 miles of proposed pipeline alignment across BLM and private lands in San Juan County, New Mexico and La Plata County, Colorado. The client was El Paso Natural Gas Company.
- Participated in sensitive and T&E species surveys for El Paso Natural Gas Company's proposed Triangle Expansion Project in San Juan County, New Mexico. Surveyed 20 miles of proposed pipeline right-of-way for various sensitive flora and fauna species. Participated in Mexican spotted owl surveys along a proposed 1,000 foot pipeline right-of-way near Window Rock, Arizona. The client was El Paso Natural Gas Company.
- Conducted sediment sampling program for Williams Field Service Company's proposed Blanco Hub to Kutz Plant pipeline crossing of the San Juan River near Bloomfield, New Mexico. The sampling program was required by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the New Mexico Environment Department.
- Prepared and acquired wetlands permits for the repair/replacement of five damaged natural gas pipelines across the Animas, San Juan, and La Plata rivers in northwest, New Mexico. Monitored the repair and replacement work to minimize impacts to state water quality standards and to T&E species. Client was Williams Field Services.
- Prepared and acquired the necessary permits and approvals for Williams Field Service Company's Blanco Hub to Kutz Plant 16" pipeline crossing of the San Juan River in San Juan County, New Mexico.
- Prepared and acquired the necessary permits and approvals for Williams Field Service Company's proposed Hallwood Loop Reroute and Barker-Kutz Loop pipeline crossings of the La Plata River in San Juan County, New Mexico.

- Project Environmental Scientist on Environmental Impact Statement (EIS) for Heery International's proposed Seward Institute of Marine Science Infrastructure Improvement Project in Seward, Alaska. Responsible for fish, wildlife, vegetation, and endangered species investigations and impact analyses.
- Project Environmental Scientist on EA for the proposed Northern Intertie for Golden Valley Electric Association. The project examined more than 300 miles of alternative transmission route alignments between Healy and Fairbanks, Alaska. Responsibilities included fish and wildlife investigations, recreation and subsistence resource investigations, agency consultations, and land status investigations.
- Principal Investigator for Environmental Analysis for the Copper Valley Intertie Feasibility Study for Copper Valley Electric Association. The project examined a 135 mile transmission line corridor and 260 miles of alternative routes from Sutton to Glennallen, Alaska. Responsible for identification of fish and wildlife habitats, recreation areas, and project impacts analyses.
- Principal Investigator on EIS for the Katmai National Park and Preserve Research Drilling Project for the National Park Service. The project proposed to conduct research drilling to learn about volcanism within the park, which is a federal designated National Wilderness Area. Duties included fish, wildlife, and vegetation investigations, impact analyses, hydrological investigations, and report preparation.
- Worked as a Project Environmental Scientist/Biologist responsible for fish, wildlife, vegetation, and endangered species investigations and impact analyses on numerous Environmental Impact Statements (EISs) proposed on public lands in Alaska.

CLEAN WATER ACT

- Project Manager for the preparation of an EA for a proposed 38-mile, 30 inch diameter, natural gas pipeline in Rio Arriba and San Juan counties, New Mexico. The project included acquiring necessary CWA permits for the crossing of three rivers in the project area. The project area spanned lands managed by BLM, the BOR, the State of New Mexico and private lands. The client was Williams Gas Processing Co.
- Project Manager for a 10-acre wetland habitat enhancement and creation project on the San Juan River in northwest New Mexico. The project is designed to enhance riparian habitat for southwestern willow flycatcher. Project includes baseline presence/absence surveys for 3 years, National Environmental Policy Act compliance, Clean Water Act permitting, construction management, implementation of a planting plan, and long term willow flycatcher and habitat monitoring. The client is the Department of the Interior, Central Utah Project Completion Act.

RENEWABLE ENERGY

- Program Manager for Stirling Energy Systems Solar One Utility-Scale Power Plant Summary Environmental Report. As part of due diligence in support of the project's Application for Certification to the California Energy Commission, the report provided a description of environmental resources and evaluated the potential environmental impacts of Southern California Edison Company's proposed 500kV transmission line and substation and its alternatives. The report generally described the affected environment and summarized potential issues and areas of concern associated with these upgrades.
- Program Manager for Stirling Energy Systems Cumulative Impacts Analysis and Alternatives for Solar Two Project. Responsible for leading Ecosphere team in developing and implementing a new approach for cumulative impacts and alternatives analysis for the AFC for Stirling Energy Systems' Solar Two 750 MW solar thermal electric development located near El Centro, California. As a thermal energy project larger than 50MW, the CEC was the lead agency for the environmental impact analysis. Additionally this project is to be located

on BLM-managed land. Ecosphere designed and implemented an approach that will meet the cumulative impact analysis requirements of both CEC Preliminary Staff Assessment and BLM Draft Environmental Impact Assessment. Ecosphere demonstrated this proposed approach in a CEC/BLM workshop on cumulative and alternative impact analysis. Additionally, Ecosphere developed and analyzed project alternatives that consider alternative technologies, site locations, and land use classifications.

- Program Manager for Tessera Solar San Luis Valley Solar (SLVS) project environmental permitting activities. The SLVS project is a proposed 200 MW solar plant located in Saguache County, Colorado, on approximately 4500 acres of land. Tessera and Ecosphere are working together with the Saguache County Planning Department to submit a county application (1041) that demonstrates compliance with local land use planning policy and regulations. The permit application will contain general project information, such as a description of the project, project maps and graphics, construction methods and timing, and discussion of pertinent resources potentially affected by the project and measures to minimize effects. The application will also include environmental resource impact disclosures as required in the land use code (cultural resources, biological, geotechnical, land use, visual, etc.). Additionally, Ecosphere is delineating surface water resources and the extent of floodplains in the project analysis areas and is also handling community outreach efforts.

ENDANGERED SPECIES ACT

Southwest Willow Flycatcher

- Project Manager and biologist conducting southwestern willow flycatcher from Navajo Reservoir in New Mexico down the San Juan River to the Utah/Colorado Stateline. The project area covers approximately 110 river miles across Bureau of Land Management (BLM), Navajo Nation, and state of New Mexico administered lands. Project included identifying potential habitat and documenting nesting activity of this endangered species along the San Juan River. The client was the Department of the Interior.
- Conducted surveys for Southwestern willow flycatcher habitat at seven riparian area crossings of the proposed Tiffany Enhanced Coal Bed Methane Project, on Southern Ute Indian Tribe lands in southwest, Colorado. The client was Amoco Production Company.
- Project Manager and biologist conducting willow flycatcher presence/absence surveys at 6 drainages in southwest Colorado (including on the SUIT Reservation) under federal contract with the Department of Interior, Central Utah Project Completion Act in 2002. The inventory work was part of a DNA and sonogram data collection effort for flycatchers detected after June 20th (birds considered Extimus). An inadequate number of territories were found to warrant DNA collection. Sonograms were recorded for several flycatchers.
- Project Manager and biologist conducting SWWF surveys from Navajo Reservoir in New Mexico down the San Juan River to the Utah/Colorado Stateline. The project area covers approximately 110 river miles across Bureau of Land Management (BLM), Navajo Nation, and state of New Mexico administered lands. Project included identifying potential habitat and documenting existence of the SWWF along the San Juan River. The surveys increased the historical record of willow flycatchers (WIFL) detected along the river from 8 to over 70 records. The surveys also resulted in the first documentation of a SWWF breeding territory on the San Juan River. The client was the Department of the Interior.
- Participated on a team of biologists assembled by the USGS Colorado Plateau Research Station to survey over 200 river miles along the Green River and Colorado River in Utah for the presence/absence of SWWF and Yellow-billed cuckoo (*Coccyzus americanus*). The surveys were conducted as part of a contract with the DOI, the Utah Division of Wildlife, and the National Park Service (NPS). Canyonlands National Park was the primary survey area. Numerous WIFL were documented, with no SWWF breeding detected. One (1) yellow-billed cuckoo was documented along the Green River. Surveys are scheduled to continue in 2000.

- Conducted surveys for potential SWWF habitat at seven riparian area crossings of the proposed Tiffany Enhanced Coal Bed Methane Project, on Southern Ute Indian Tribe lands in southwest, Colorado. The client was Amoco Production Company.
- Project Manager for MAPCO natural gas pipeline project (350 miles) and the TransColorado natural gas pipeline project (250 miles) in Utah, Colorado and New Mexico. Independently conducted presence/absence surveys for Southwestern willow flycatcher (SWWF) surveys at 30 sites in Utah, Colorado, and New Mexico. Survey resulted in the documentation of migratory willow flycatchers. No breeding detected.
- In 1999, conducted SWWF presence/absence surveys at 2 sites on lands administered by the Forest Service, Pagosa Ranger District in southwestern Colorado. No SWWF or willow flycatchers were detected.
- In 1999, conducted SWWF presence/absence surveys at 4 sites around Navajo Reservoir near Arboles, Colorado. The client was the Bureau of Reclamation. Surveys resulted in the documentation of a single migrant willow flycatcher. Survey summary reporting recommended the preservation of potential SWWF habitat slated to be altered for recreational purposes.
- Monitored SWWF breeding territories located during the course of Ecosphere SWWF surveys along the San Juan River through New Mexico. In 1997 a single nest was monitored with the result fledging of at least 1 SWWF. In 1998 four (4) nests were monitored in the same breeding territory, with the resulting fledging of at least 5 SWWF. Nest monitoring included the assessment of potential impacts from Brown-headed cowbird parasitism. No parasitism was documented.

Mexican Spotted Owl

- Mr. Fitzgerald has experience performing and participating in nocturnal surveys, follow-up nest surveys, mousing, and habitat and distribution studies for Mexican Spotted Owls in New Mexico.
- April-July 2000; and April, June and July 2001: Performed MSO surveys and assisted in training staff for U.S. Air Force Overflight Study, Gila National Forest, New Mexico. Conducted nocturnal surveys, and performed morning follow-up visits using mousing to determine breeding status and nest locations. Conducted additional daytime habitat and nesting/roosting surveys.
- Breeding seasons 2000-2003: Managed and/or conducted nocturnal MSO presence/absence surveys for multiple oil and gas development projects in the Carson National Forest.
- Fall 2000 and Spring 2001: Managed and participated in the survey design and conducted surveys of Saw-whet, Boreal, Northern Pygmy, Long-eared, and Great-Horned Owls for the Biological Assessment of the Proposed Expansion of the Durango Mountain Resort in the Upper Animas River Basin in San Juan and La Plata County, Colorado.
- 2004: Managed and conducted MSO surveys on approximately 2,700 acres within the Jicarilla Ranger District (JRD). Surveys were conducted in the La Jara, La Manga and AC West timber treatment areas.
- 2002: Managed and participated in surveys in an MSO inventory on approximately 18,300 acres on the Gila National Forest, Silver City Ranger District. Specifically, in the Meadow Creek, Sheep Coral, and Little Cherry Creek Management Project Areas. Six different spotted owl PACs were discovered and delineated.
- Attended a MSO training at Mesa Verde National Park in the late 1990s conducted by Charles Johnson.

Other TES Experience

- In 1999 and 1997, monitored Peregrine falcon eyries and Golden eagle nest sites for the Farmington Field Office of the Bureau of Land Management (BLM). Surveys were to

determine area occupancy and monitored potential disturbances from vicinity seismic testing.

- Monitored active Northern goshawk nest in the vicinity of a proposed pipeline right-of-way in Dolores-Mancos District, San Juan National Forest. Monitored nest through the fledging period.
- In 1998 and 1999, conducted surveys and prepared Biological Assessments (BAs) and Biological Evaluations (BEs) for placement of telecommunications cables across U.S. Forest Service land in the San Juan National Forest, and across Bureau of Reclamation lands in southwest Colorado. Conducted BAs and BEs for the placement of electric utility lines across National Forest lands in the Pagosa and Durango areas of southwestern Colorado.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

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

**Docket No. 08-AFC-5
PROOF OF SERVICE**
(Revised 4/12/10)

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DECLARATION OF SERVICE

I, Corinne Lytle, declare that on May 10, 2010, I served and filed copies of the attached, Applicant's Supplemental and Rebuttal Testimony. The original documents, filed with the Docket Unit, are accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[\[http://www.energy.ca.gov/sitingcases/solartwo/index.html\]](http://www.energy.ca.gov/sitingcases/solartwo/index.html)

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

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

sent electronically to all email addresses on the Proof of Service list;

by personal delivery;

by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

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FOR FILING WITH THE ENERGY COMMISSION:

sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (*preferred method*);

OR

depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 08-AFC-5

1516 Ninth Street, MS-4

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

Original signed by

—

Corinne Lytle