

**CALIFORNIA ENERGY COMMISSION**

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May 29, 2013

Mr. Dan Neville  
Project Director, Development  
NextEra Energy Resources  
505 14th Street, Suite 310  
Oakland, CA 94612

California Energy Commission

**DOCKETED  
09-AFC-6C**

TN 71016

MAY 29 2013

**RE: BLYTHE SOLAR POWER PROJECT AMENDMENT (09-AFC-6C)  
DATA REQUEST SET 1 (Nos. 1-19)**

Dear Mr. Neville:

The Energy Commission staff has reviewed the Petition to Amend (Petition) for the Blythe Solar Power Project (BSPP) and requires additional information to supplement the environmental analysis pursuant to Title 20, California Code of Regulations, Section 1769(a)(1)(E). The California Energy Commission staff seeks the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project; 2) assess whether the facility would be constructed and operated in compliance with applicable regulations; 3) assess whether the project would result in significant environmental impacts; 4) assess whether the facilities would be constructed and operated in a safe, efficient, and reliable manner; and 5) assess potential mitigation measures.

This set of data requests (Nos. 1-20) is being made in the areas of: Biological Resources (Nos. 1-10), Hazardous Materials Management (No. 11), Public Health (No. 12), Soils and Water Resources (Nos. 13-15), Transmission System Engineering (Nos. 16-17), Waste Management (No. 18) and Worker Safety and Fire Protection (No 19). Staff requests that written responses to the enclosed data requests be provided on or before June 17, 2013 per the Committee schedule.

If you are unable to provide the information requested, need additional time, or your client objects to providing the requested information, please send a written notice to both the Committee and me within 20 days of receipt of this information request. The notification should contain the reasons for not providing the information and the grounds for any objections.

Blythe Solar Power Project (09-AFC-6C)  
Data Request Cover Letter  
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If you have any questions, please call me at (916) 651-8891 or email me at [mary.dyas@energy.ca.gov](mailto:mary.dyas@energy.ca.gov).

Sincerely,

Mary Dyas  
Compliance Project Manager

Enclosure  
Data Requests

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**Technical Area:** Biological Resources

**Author:** Andrea Martine

**BACKGROUND: NOISE IMPACTS FROM HYDRAULIC RAM**

In the Revised Petition for Amendment (2.8.4 System Installation) (modified project), a hydraulic ram may be used to drive steel piles into the ground for the tracking support structures. The approved project's solar trough technology did not require this type of installation and therefore noise from this equipment was not evaluated.

**DATA REQUEST:**

1. Noise impacts from Hydraulic Ram. Please provide an isopleths map of noise levels in dB from a hydraulic ram operating near the project boundary to 50 feet beyond boundary and 100 feet beyond boundary or until the dB level drops to < 60dB or lower from the edge of the boundary. Please include the distance it drops below 60dB.

**BACKGROUND: SPECIAL-STATUS PLANTS**

In August and September 2012, surveys were conducted to determine the presence, distribution, and abundance of special-status late summer and early fall plants. Two additional species were found, Abrams' spurge (*Chamaesyce abramsiana*, Rare Plant Rank 2.2) and desert unicorn plant (*Proboscidea althaeifolia*, Rare Plant Rank 4). The Revised Petition for Amendment Table 5.1-1 (Special-Status Summer Annual Plants Observed within the Modified Project During 2012) shows the number of plants observed per unit and for the gen-tie route. From the approved project two special-status plants Las Animas colubrina and Harwood's milk-vetch were also documented.

**DATA REQUESTS:**

2. Map of Special-Status Plants. Please provide a figure of the approved project with an overlay of the modified project boundaries and include locations of Las animas colubrina, Harwood's milk-vetch, and Abrams' spurge. Please also provide the electronic files for all known special-status plant locations as shape or geodatabase files.
3. Impacts and Mitigation of all Special-Status Plants. Please provide impact acres and a discussion of the mitigation for Abrams' spurge, Las Animas colubrina, and Harwood's milk-vetch. Include population information for the modified project vs. approved project. Include indirect and direct impacts the changes in grading regime for the modified project would have on these species.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**BACKGROUND: VEGETATION AND STATE WATERS**

In the approved project all vegetation was to be removed and the site graded. The Revised Petition to Amend (modified project) states that vegetation would be cleared from roadways, access ways, and where concrete foundations are used. Vegetation would be mowed as necessary in the remainder of the solar plant site. It also states that in selected areas, limited use of “disc and roll” and micrograding techniques may be used.

**DATA REQUESTS:**

4. Description of Impacts to all Vegetation Communities. Please describe in detail how the vegetation would be impacted by the changes in grading (e.g. mowing and micrograding). Include in your discussion, the percentage of vegetation removed for the modified project for the different vegetation removal techniques and percentage of vegetation that will not be removed (i.e. mowed). Also include the direct and indirect impacts to the vegetation communities.
5. Map of Vegetation Communities. Please provide a figure of the upland vegetation and other vegetation types for the approved project with an overlay of the modified project boundaries. Please also provide the electronic files for all known vegetation communities as shape or geodatabase files.
6. Map of Ephemeral Drainages (State Jurisdictional Waters). Please provide a figure of all the ephemeral drainages (state jurisdictional waters) with an overlay of the modified project boundaries. Please also provide the electronic files for all known ephemeral drainage locations as shape or geodatabase files.
7. Impacts to Ephemeral Drainages (State Jurisdictional Waters). Please provide a detailed explanation of how the change in grading (e.g. mowing and removal of vegetation in selected areas) of the modified project would directly and indirectly impact ephemeral drainages. Discussion should include effects on the drainages hydrology, vegetation and wildlife functions. Also include impacts to ephemeral drainages upstream, onsite, and downstream of the modified project including information on all impacts to ephemeral drainages that would result from placement of PV arrays from each of the following panel support systems: fixed tilt, single-axis tracking, and foundations.
8. Impacts to Ephemeral Drainages (State Jurisdictional Waters). Please describe in detail how the reduction in grading will affect surface water flow through the site. In the description include how this change in the project would eliminate the need for diversion channels including how the change in grading impacts surface flow upstream and downstream of the site.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**BACKGROUND: CONSTRUCTION IMPACTS**

Construction impacts of the modified project are not discussed in the Revised Petition to Amend (modified project) and staff needs to understand how these impacts may change with the use of PV technology. For the approved project, staff analyzed the impacts of construction on plants and wildlife in terms of the following: direct mortality, injury, equipment, or roadways; habitat loss or habitat community degradation of vegetation through fugitive dust, introduction of invasive weeds; disruption of wildlife movement and gene flow; and disturbance by equipment from noise and vibration. The analysis of the modified project does not provide any information on construction impacts of the modified project on special-status plants, vegetation, wildlife, or habitat in comparison to the original project proceeding. Construction is expected to occur Monday thru Friday 7:00 am to 10:00 pm.

**DATA REQUEST:**

9. Please provide a discussion comparing the biological impacts of construction activities associated with PV technology to the construction impact analysis performed for the approved project using solar trough technology to burrowing owl, desert tortoise, Mojave fringe-toed lizard, golden eagle, Nelson's bighorn sheep, American badger, desert kit fox, bats, and special-status plant species. Specifically, please discuss potential impacts from direct mortality, injury, and equipment; habitat loss or habitat community degradation of vegetation through fugitive dust, introduction of invasive weeds; ephemeral drainage habitat changes; disturbance to nocturnal wildlife including bats from nighttime construction (e.g. lighting); and disturbance by equipment from noise and vibration. In addition, please provide any additional measures that would be implemented to minimize or avoid direct and indirect effects to these species and habitat during construction.

**BACKGROUND: OPERATIONAL IMPACTS**

Operational impacts of the modified project are not discussed in the Petition to Amend and staff needs to understand how these impacts may change with the use of PV technology. Staff analyzed operational impacts of the approved project on plants and wildlife in terms of the following: increased raven subsidies, operational noise, traffic, avian collision and electrocution, and glare/lighting.

**DATA REQUESTS:**

10. Please provide a comparison of the biological impacts of an operating PV power plant (modified project) and operation impact analysis performed for the approved project to burrowing owl, Mojave fringe-toed lizard, golden eagle, Nelson's bighorn sheep, and special-status plant species. Specifically, please discuss potential impacts from long-term maintenance activities associated with PV power plants such as increase raven subsidies, operational noise, traffic, avian collision and electrocution with PV equipment and other associated

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

facilities, and glare/lighting from reflected light on nearby vegetation and habitat. Please also provide any additional measures that would be implemented to minimize or avoid direct and indirect effects to these species and habitat during operation.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**Technical Area:** Hazardous Materials Management  
**Author:** Dr. Alvin Greenberg

**BACKGROUND**

As an option to supply potable water for use at the site, the project may decide to treat groundwater on site by using either a trailer-mounted, totally enclosed and self-contained water treatment system or a free-standing treatment facility. If a free-standing facility is chosen, various water treatment chemicals including biocides, scale inhibitors, etc., might be used. These chemicals are not listed in the Revised Petition for Amendment (April 2013) in Table 2-7. Also, scale inhibitors and algae control chemicals for control of corrosion and biological build-up in the reverse osmosis equipment and pipes might also be used. These also are not listed in Table 2-7. Many of the chemicals in use today for these purposes are highly toxic and/or corrosive. To adequately assess the potential impacts to workers and the off-site public due to the transportation, storage, and use of these chemicals, staff needs to know their identity.

**DATA REQUESTS**

11. Please identify by name, CAS number, concentration, and maximum amount to be stored on site, each chemical that might be or would be used in the water treatment facility, including biocides, scale inhibitors, and chemicals to control algae.

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DATA REQUESTS – SET 1**

**Technical Area:** Public Health  
**Author:** Huei-An Chu (Ann), PhD

**BACKGROUND**

**Construction Health Risk Assessment**

In the Public Health section of the Revised Petition for Amendment, the cancer risk over a four-year period from diesel particulate matter (DPM) emissions was calculated based on the Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012). The cancer risk due to construction of the modified project was summarized in Table 4.3-1, and the Excel file of risk calculation (E.3 BSPP Screening HRA Results 040113.xlsx) was also provided by the applicant. Staff needs an explanation for the applicant's choices in calculating construction cancer risk.

**DATA REQUEST**

12. According to E.3 BSPP Screening HRA Results 040113.xlsx, the construction cancer risk was the sum of the risks of the "Cancer Risk for Resident Child up to 2 Years Old" and "Cancer Risk for Resident Child 2 to 15 Years Old". Please explain:
  - a. Why did the applicant calculate the risk for children in particular?
  - b. Why did the applicant sum up the risk of children up to 15 years? What is the reference for such an age range for children?
  - c. Which sections or pages of the Revised Technical Support Document for Exposure Assessment and Stochastic Analysis (OEHHA 2012) was this calculation based on?



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DATA REQUESTS – SET 1**

**Technical Area:** Soil and Water Resources  
**Author:** Abdel-Karim Abulaban

**BACKGROUND**

In the approved project, the site was going to be graded relatively flat for the placement of the supports for the parabolic trough system. Also, flows were going to be routed away from the site and therefore the potential for erosion across the site would be mitigated. For the amended project, the site would not be extensively graded and flows would be allowed to go through the site, mostly maintaining natural conditions.

There are three main washes, known as the North, Central, and South washes that cross the site of the amended project. Even though the owner did not give specific information regarding the placement of solar panel foundations in the washes, it is likely that panels will end up being installed in the washes. Placement of panels in the washes has the potential to adversely affect flow conditions in the washes. Consequently, erosion and local scour are likely to increase. The owner has not addressed these impacts in the amended application, nor did it address plans to prevent potential increases in erosion and local scour. Staff would like to see a map showing the approximate locations of panel foundations that would be placed in the washes. Also, staff needs information on the measures the owner proposes to control any increases in erosion and local scour. Staff, however, does not have an issue with the design event that was used to design drainage elements for the site which followed standard practice of using the 100-year 24-hour storm event.

**DATA REQUESTS**

13. Please provide a map with an appropriate scale that shows the approximate number and locations of panel foundations that would be placed in the washes that cross the site.
14. Please provide an analysis showing how much scour might be expected along panel foundations in the washes.
15. Please identify the measures that would be taken to mitigate any erosion impacts that would compromise the stability and reliability of the panels.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**Technical Area:** Transmission System Engineering  
**Authors:** Laiping Ng

**BACKGROUND**

Staff needs to determine if the modified project will be in conformance with the existing Phase I and Phase II generator and interconnection.

**DATA REQUEST:**

16. Please provide written confirmation from the California ISO that the existing Phase I and Phase II generator interconnection studies are applicable to the change of technology, new plant configuration, and on-line date. If the California ISO reports that the Phase I and/or Phase II Interconnection Studies would need to be updated, please provide the studies updated for the modified project.
17. Provide a detailed one-line diagram for the Colorado River Substation after addition of the modified project.
  - a. Show the bay arrangement and the necessary equipment required to interconnect the modified project.
  - b. Provide the ratings of the breakers, disconnect switches, relays, buses, etc.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**Technical Area:** Waste Management  
**Author:** Ellen Townsend-Hough

**BACKGROUND**

The Final Energy Commission Decision for the approved Blythe Solar Power Project was issued September 15, 2010. The Phase I Environmental Site Assessment (ESA) presented in the Application for Certification for the approved project was completed in May 2009.

In 2002, the United States Environmental Protection Agency (EPA) was charged under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to establish by rule the “generally accepted good commercial and customary standards and practices” that had to be followed by a party seeking immunity from property contamination liability. The American Society for Testing and Materials (ASTM) established method ASTM 1527-05 (Standard Practice for Environmental Site Assessments) to provide procedures for conducting investigations to adequately evaluate the potential for a site to contain contamination. The EPA adopted the ASTM procedures and, after November 1, 2006, buyers and sellers of real estate were compelled to either comply with the requirements of the Environmental Protection Agency’s “All Appropriate Inquiry Rule,” or follow the standards set forth in the ASTM E1527-05 Phase I Environmental Site Assessment Process, to satisfy the statutory requirements for conducting all appropriate inquiries.

In ASTM E 1527-05, provisions for updating an existing ESA are provided. According to ASTM E 1527-05, Section 4.6, *Continued Viability of Environmental Site Assessment*, and Section 6, *User’s Responsibility*, updating the ESA is required within a year if a new project is proposed for the property on which the initial ESA was prepared.

Specifically, Section 4.6 of ASTM E 1527 states:

*4.6 Continued Viability of Environmental Site Assessment—*  
Subject to Section 4.8, an *environmental site assessment* meeting or exceeding this practice and completed less than 180 days prior to the date of acquisition of the *property* or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid. If within this period the assessment will be used by a different *user* than the *user* for whom the assessment was originally prepared, the subsequent *user* must also satisfy the User’s Responsibilities in Section 6.

Subject to Section 4.8 and the User’s Responsibilities set forth in Section 6, an *environmental site assessment* meeting or exceeding this practice and for which the information was collected or updated within one year prior to the date of acquisition of the *property* or (for transactions not involving an acquisition) the date of the intended transaction may be used

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DATA REQUESTS – SET 1**

provided that the following components of the inquiries were conducted or updated within 180 days of the date of purchase or the date of the intended transaction:

- (i) *interviews with owners, operators, and occupants;*
- (ii) searches for recorded environmental cleanup liens;
- (iii) reviews of federal, tribal, state, and local government records;
- (iv) visual inspections of the *property* and of *adjoining properties*; and
- (v) the declaration by the *environmental professional* responsible for the assessment or update.

In summary ASTM E1527-05 states:

1. An ESA meeting or exceeding E 1527 is presumed to be valid if "completed less than 180 days prior to the date of acquisition."
2. An ESA for which information was collected or updated within one year prior to the date of acquisition may be used as long as the following components were collected or updated within 180 days of the date of intended acquisition: interviews with owners, operators and occupants; searches for environmental cleanup liens; review of federal, tribal, state, and local government records; visual inspections of the subject property and adjacent properties; and a declaration by the environmental professional (EP) for the assessment or update.
3. A Phase I ESA that is older than one year may be used as a "prior assessment" reference. The older historical data is history (unchangeable), and therefore it is valid and can be used. This includes such data as fire insurance maps, historical topographic maps, historical street directories, and aerial photos.

The Phase I Environmental Site Assessment prepared for the approved project has not been updated in over five years. Staff needs an ESA for the modified project that is currently valid with respect to completion date and testing standards.

**DATA REQUEST**

18. In accordance with requirements stated in ASTM E 1527-05, please provide an updated Phase I ESA that describes the proposed project site and existing site conditions and identifies any new Recognized Environmental Conditions in accordance with the previously indicated testing standard.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6C)  
DATA REQUESTS – SET 1**

**Technical Area:** Worker Safety/Fire Protection  
**Author:** Dr. Alvin Greenberg

**BACKGROUND**

The modified project would consist of a very large number of solar PV panels, wire, and capacitors. This array can potentially subject workers to routine electrical hazards. Additionally, in the event of a fire involving solar PV panels, their connecting wires, and/or their capacitors, both on-site workers and emergency response personnel may be subject to electrical shock hazards of sufficient magnitude to cause serious injury or death. Since cutting the circuits does not result in a de-energized solar panel (which can remain energized for up to 72 hours in the dark), these hazards are real and difficult to address.

The applicant is proposing to address safety procedures to prevent accidental electrocutions in an Emergency Action Plan as part of a proposed revision to Condition of Certification **WORKER SAFETY-2**. However, to adequately assess the potential impacts to workers and emergency responders, staff needs to know what safety measures are being proposed prior to the Commission's consideration of this amendment to ensure that workers and first responders are adequately protected.

**DATA REQUESTS**

19. Please identify safety measures, including engineering controls and administrative controls (Best Management Practices) that will be implemented to protect workers and emergency responders when a fire or other event that necessitates a response occurs that involves solar panels.



**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**

***BLYTHE SOLAR POWER  
PROJECT AMENDMENT***

**Docket No. 09-AFC-6C**

**PROOF OF SERVICE  
(EST. 5/09/2013)**

**SERVICE LIST:**

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**INTERVENOR FROM PREVIOUS  
PROCEEDING (09-AFC-06)**

California Unions for Reliable Energy  
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United States Fish and Wildlife Service  
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- Docket Unit  
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1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
docket@energy.ca.gov

OTHER ENERGY COMMISSION  
PARTICIPANTS (LISTED FOR  
CONVENIENCE ONLY):

*After docketing, the Docket Unit will provide a copy to the persons listed below. Do not send copies of documents to these persons unless specifically directed to do so.*

KAREN DOUGLAS  
Commissioner and Presiding Member

\*DAVID HOCHSCHILD  
Commissioner and Associate Member

Raoul Renaud  
Hearing Adviser

Galen Lemei  
Adviser to Presiding Member

Jennifer Nelson  
Adviser to Presiding Member

\*Kelly Foley  
Adviser to Associate Member

Eileen Allen  
Commissioners' Technical  
Adviser for Facility Siting

DECLARATION OF SERVICE

I, Mary Dyas, declare that on May 29, 2013, I served and filed copies of the attached Blythe Solar Power Project Data Requests Set 1 dated May 29, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at: [http://www.energy.ca.gov/sitingcases/blythe\\_solar/](http://www.energy.ca.gov/sitingcases/blythe_solar/).

The document has been sent to the other persons on the Service List above in the following manner:

*(Check one)*

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

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

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

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

Dated: May 29, 2013

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