

## CALIFORNIA ENERGY COMMISSION

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**DOCKET**  
**09-AFC-6C**

DATE	JUL 22 2011
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**DATE:** July 22, 2011

**TO:** Interested Parties

**FROM:** Mary Dyas, Compliance Project Manager

**SUBJECT: Blythe Solar Power Project (09-AFC-6C)**  
**Staff Analysis of Proposed Modifications to the Design of the Facility and the Location of its Transmission Line to Reflect the New Proposed Location of the Colorado River Substation**

On June 14, 2011, Palo Verde Solar I, LLC filed a petition with the California Energy Commission (Energy Commission) requesting to modify the Blythe Solar Power Project (BSPP). Staff prepared an analysis of this proposed change and a copy is enclosed for your information and review.

The 1000-megawatt solar thermal project was certified by the Energy Commission on September 15, 2010. The facility will be located approximately eight miles west of the City of Blythe and two miles north of Interstate 10 on land managed by the Bureau of Land Management (BLM) in Riverside County, California. The project has received its Right-Of-Way Grant and Notice to Proceed to construction for Phase 1A from the BLM and a Notice to Proceed from the Energy Commission for Phase 1A. Phase 1A of the BSPP is currently under construction.

The petition to amend proposes to modify the facility design and the location of its transmission line to reflect the new proposed location of the Colorado River Substation. Proposed modifications include:

1. Revised General Arrangement for the Shared Facilities Area
2. Modification of Generation Tie-Line route
3. Relocation of existing SCE 12 kV distribution transmission poles to allow improvement of a portion of Black Rock Road
4. Replacement of the Steam Turbine Generator (STG) manufactured by Toshiba Model Number TCDF-33.5 with an STG manufactured by Siemens, Model Number SST-5000
5. Revised General Arrangement of the Power Block
6. Revisions to Air Quality Conditions of Certification to make consistent with Mojave Desert Air Quality Management District conditions contained in the Authority to Construct

Energy Commission staff has reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes revisions to existing conditions of certification for Air Quality and Biological Resources. It is staff's opinion that, with the implementation of revised conditions, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition and staff's analysis has been posted on the Energy Commission's webpage at [www.energy.ca.gov/sitingcases](http://www.energy.ca.gov/sitingcases). The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the August 24, 2011, Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to August 22, 2011.

Mary Dyas, Compliance Project Manager  
California Energy Commission  
1516 Ninth Street, MS-2000  
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Comments may be submitted by fax to (916) 654-3882, or by e-mail to [mdyas@energy.state.ca.us](mailto:mdyas@energy.state.ca.us). If you have any questions, please contact me at (916) 651-8891.

For further information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at [publicadviser@energy.state.ca.us](mailto:publicadviser@energy.state.ca.us). News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail at [mediaoffice@energy.state.ca.us](mailto:mediaoffice@energy.state.ca.us).

Enclosure

**BLYTHE SOLAR POWER PROJECT (09-AFC-6)**  
**Petition to Amend Final Commission Decision**  
**INTRODUCTION AND SUMMARY**  
Mary Dyas

**INTRODUCTION**

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On June 14, 2011, Palo Verde Solar I, LLC (PVSI) filed a petition with the California Energy Commission requesting to modify the Blythe Solar Power Project (BSPP or project). The 1000-megawatt solar thermal project was certified by the Energy Commission on September 15, 2010. The facility will be located approximately eight miles west of the City of Blythe and two miles north of Interstate-10 on land managed by the Bureau of Land Management (BLM) in Riverside County, California. The project has received its Right-Of-Way Grant and Notice to Proceed to construction for Phase 1A from the BLM and a Notice to Proceed from the Energy Commission for Phase 1A. Phase 1A of the BSPP is currently under construction.

The purpose of the Energy Commission's review process is to assess any impacts the proposed modifications would have on environmental quality and public health and safety. The process includes an evaluation of the consistency of the proposed changes with the Energy Commission's Final Decision (Decision), and if the project, as modified, will remain in compliance with applicable laws, ordinances, regulations, and standards (Title 20, Calif. Code of Regulations, section 1769).

This Staff Analysis contains the Energy Commission staff's evaluation of the affected technical areas including Air Quality and Biological Resources.

**PROJECT LOCATION AND DESCRIPTION**

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The project is proposed to be located in the California inland desert, approximately eight miles west of the city of Blythe and two miles north of the Interstate-10 freeway in Riverside County, California. Construction and operation of the project would disturb a total of about 7,030 acres.

The BSPP would utilize solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation on a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to high temperature (750°F) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.

**NECESSITY FOR THE PROPOSED MODIFICATIONS**

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The project owner has requested changes to the project's Decision that reflect modifications to the design of the facility and to modify the location of its transmission line to reflect the new proposed location of the Colorado River Substation. All of the proposed modifications are the result of changes discovered to be necessary as part of

the final design of the BSPP or as a result of changed circumstances since the Decision.

## **SUMMARY OF STAFF ANALYSIS**

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The technical areas contained in the Staff Analysis indicate recommended Staff changes to the existing BSPP license and conditions of certification. Staff believes that by requiring the proposed changes to the existing conditions, the potential impacts of the proposed changes would be reduced to less than significant levels. The details of the proposed condition changes can be found under the appropriate technical headings in this Staff Analysis.

Energy Commission technical staff reviewed the petition to amend for potential environmental effects and consistency with applicable LORS. Staff determined that the technical or environmental areas of cultural resources, facility design, geological and paleontological resources, hazardous materials management, noise and vibration, public health, traffic and transportation, transmission line safety and nuisance, transmission system engineering, visual resources, waste management, and worker safety and fire protection are not affected by the proposed changes, and no revisions or new conditions of certification are needed to ensure the project remains in compliance with all applicable LORS.

Staff determined that the technical or environmental areas of air quality and biological resources would be affected by the proposed project changes and has proposed revised conditions of certification in order to assure compliance with LORS and/or to reduce potential environmental impacts to a less than significant level.

## **STAFF RECOMMENDATIONS AND CONCLUSIONS**

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Staff concludes that the following required findings mandated by Title 20, section 1769(a)(3) of the California Code of Regulations can be made and will recommend approval of the petition to the Energy Commission:

- A. There will be no new or additional unmitigated significant environmental impacts associated with the proposed changes;
- B. The facility will remain in compliance with all applicable laws, ordinances, regulations and standards;
- C. The changes will be beneficial to the project owner by allowing the project to connect to the new Colorado River Substation as approved in the Decision; and,
- D. There has been a substantial change in circumstances since the Energy Commission certification justifying the changes in that the location of the Colorado River Substation has changed.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6)**  
**Petition to Amend Final Commission Decision**  
**AIR QUALITY**  
**Jacquelyn Leyva**

## **INTRODUCTION**

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The Blythe Solar power Project (BSPP or project) is located in the California inland desert, approximately eight miles west of the City of Blythe and two miles north of Interstate 10 on land managed by the Bureau of Land Management (BLM) in Riverside County, California. The California Energy Commission (Energy Commission) approved the project in its Decision dated September 15, 2010. The project has received its Right-Of-Way Grant and Notice to Proceed to construction for Phase 1A from the BLM and a NTP from the Energy Commission for Phase 1A. Phase 1A of the BSPP is currently under construction.

The Mojave Desert Air Quality Management District (MDAQMD) issued its Authority to Construct (ATC) to allow construction of the project in November of 2010 with changes to certain conditions that are minor and would neither be considered a substantive change nor would result in a change in emissions such that a revised districts' Final Determination of Compliance (FDOC) was required; however an amendment to the Energy Commission's Conditions of Certification is needed so that changes in the ATC are consistent with the approved Energy Commission Conditions of Certification.

- Condition AQ-17 (Item 'e') was modified in the ATC to define a potential leak. The corresponding condition in the air district's ATC for each HTF Expansion Tank now reads as follows: HTF Expansion Tank, Condition 5, (e): "If a leak greater than 100 ppm above background is found, the leaking component shall be repaired, replaced or removed within 7 calendar days of detection."
- There is an updated order number applicable to gasoline tanks that are now referenced in the ATC for the gasoline tank used during construction. The reference to Executive Order (EO) Vapor Recovery (VR) -401-A in the FDOC has been updated to EO VR-401-B in the ATC.

## **LAWS, ORDINANCES, REGULATION, AND STANDARDS COMPLIANCE**

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The project's proposed amendment is subject to all the LORS described in the original Staff Assessment (SA) and Revised Staff Assessment (RSA) (CEC 2010). The original Decision certifying the BSPP and any and all amendments thereafter ensure that the project will remain in compliance with all applicable laws, ordinances, regulations and standards (LORS).

The proposed modifications would comply with all applicable LORS and will not result in significant environmental impacts including any changes to Conditions of Certification

necessary to accommodate the proposed modifications. **Air Quality Table 1** summarizes the currently applicable LORS for the facility.

**Air Quality Table 1  
Laws, Ordinances, Regulations, and Standards**

<b>Applicable LORS</b>	<b>Description</b>
<b>Federal</b>	
40 Code of Federal Regulations (CFR) Part 52	Nonattainment New Source Review (NSR) requires a permit and requires Best Available Control Technology (BACT) and Offsets. Permitting and enforcement is delegated to Mojave Desert Air Quality Management District (MDAQMD).  Prevention of Significant Deterioration (PSD) requires major sources or major modifications to major sources to obtain permits for attainment pollutants. The BSPP is a new source that does not have a rule listed emission source thus the PSD trigger levels are 250 tons per year for NO <sub>x</sub> , VOC, SO <sub>x</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> and CO.
40 CFR Part 60	New Source Performance Standards (NSPS), Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generation Units. Establishes recordkeeping and reporting requirements for natural gas fired steam generating units. Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Establishes emission standards for compressions ignition internal combustion engines, including emergency generator and fire water pump engines.
40 CFR Part 93 General Conformity	Requires determination of conformity with State Implementation Plan for Projects requiring federal approvals if project annual emissions are above specified levels.
<b>State</b>	
Health and Safety Code (HSC) Section 40910-40930	Permitting of source needs to be consistent with Air Resource Board (ARB) approved Clean Air Plans.
HSC Section 41700	Restricts emissions that would cause nuisance or injury.
California Code of Regulations (CCR) Section 93115	Airborne Toxics Control Measure for Stationary Compression Ignition Engines. Limits the types of fuels allowed, established maximum emission rates, establishes recordkeeping requirements on stationary compression ignition engines, including emergency generator and fire water pump engines.
<b>Local (Mojave Desert Air Quality Management District, MDAQMD)</b>	
Rule 201 and 203 Permits Required	Requires a Permit to Construct before construction of an emission source occurs. Prohibits operation of any equipment that emits or controls air pollutant without first obtaining a permit to operate.
Rules 401, 402, and 403 Nuisance, Visible Emissions, Fugitive Dust	Limits the visible, nuisance, and fugitive dust emissions and would be applicable to the construction period of the project.
Rule 404 Particulate Matter - Concentration	Limits the particulate matter concentration from stationary source exhausts.
Rule 406 Specific Contaminants	The rule prohibits sulfur compound emissions in excess of 500 ppmv.
Rule 407 Liquid and Gaseous Air Contaminants	The rule prohibits carbon monoxide emissions in excess of 2,000 ppmv.
Rule 409 Combustion Contaminants	Limits the emissions from fossil fuel combustion.
Rule 431 Sulfur Content of Fuels	Limits the sulfur content of liquid fuels to no more than 0.5% by weight.

Applicable LORS	Description
Rule 900 Standard of Performance for New Stationary Source	Incorporates the Federal NSPS (40 CFR 60) rules by reference.
Rule 1303 New Source Review	Specifies BACT/Offsets technology and requirements for a new emissions unit that has potential to emit any regulated pollutants.
Rule 1306 Electric Energy Generating Facilities	Describes actions to be taken for permitting of power plants that are within the jurisdiction of the Energy Commission.

## SETTING

Federal and state ambient air quality attainment status designations have not changed significantly since the 2010 Energy Commission Decision. **Air Quality Table 2** summarizes current area ambient air quality attainment status designations for the MDAQMD.

**Air Quality Table 2  
Federal and State Attainment Status  
Project Site Area within Riverside County**

Pollutant	Attainment Status <sup>a</sup>	
	Federal	State
Ozone	Attainment <sup>b</sup>	Moderate Nonattainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment <sup>c</sup>	Attainment
SO <sub>2</sub>	Attainment	Attainment
PM10	Attainment <sup>b</sup>	Nonattainment
PM2.5	Attainment	Attainment

Source: ARB 2011b, U.S.EPA 2011a.

<sup>a</sup> Attainment = Attainment or Unclassified, where Unclassified is treated the same as Attainment for regulatory purposes.

<sup>b</sup> Attainment status for the site area only, not the entire MDAB.

<sup>c</sup> Nitrogen dioxide attainment status for the new federal 1-hour NO<sub>2</sub> standard is scheduled to be determined by January 2012.

## ANALYSIS

The MDAQMD issued the Authority to Construct (ATC) in November 2010. This ATC includes revised language that was changed after the FDOC was issued in July of 2010, but the changes are reflected in the current ATC and are being requested by the applicant as an amendment to ensure the project remains in compliance with all LORS.

This analysis will focus on the amendment changes requested by the applicant so that Air Quality Conditions of Certification will be consistent with MDAQMD conditions contained in the ATC. The conditions include the modification to define a potential leak, and include a more accurate reference to the Executive Order (EO) VR-401-B superseded VR-401-A and incorporates the California Air Resources Boards' (CARB) most current and requirements for above ground gasoline storage tanks.

The modifications to the project include changes to the equipment types planned for the BSP power block areas and rearrangement of the location and heights of some

equipment within the power block areas and rearrangement of the Shared Facilities area. As the emissions of these pollutants have not changed significantly, any increase in modeled impacts would be very small and would not alter the conclusions of Energy Commission staff or the Decision. Therefore, there are no recommended changes to the already approved Conditions of Certification necessary to ensure BSPP air quality impacts are mitigated to less than significant levels or to ensure the BSPP will comply with all applicable LORS (BSPP 2011).

## PROJECT EMISSION PROFILE CHANGES

The changes to the Conditions of Certification are minor and considered a substantive change and would result in a change in emissions such that a revised FDOC was required; however an amendment with the Energy Commission's Conditions of Certification is needed to reflect the changes in the ATC in order to keep consistency and remain in compliance with the Energy Commission Conditions of Certification.

## ANALYSIS OF SPECIFIC AMENDMENT REQUESTS

### 1. Change to Quantify a Leak in the Ullage System Conditions

The HTF Ullage expansion tank Conditions of Certification was changed to better quantify what constitutes a leak from the Ullage system in response to a comment on the FDOC made by the applicant. The original language was seen as being too vague and there was a need to quantify what constituted a leak. The MDAQMD used the south coast aqmd rule 1173 definition to come up with a value of 100 ppm in the HTF Ullage expansion tank. The change will affect AQ-17(e).

### 2. Administrative elements that will be amended:

The Executive Order VR-401-B superseded VR-401-A and incorporates the California Air Resources Board's most current and requirements for above ground gasoline storage tanks <http://www.arb.ca.gov/vapor/eo-astphasei.htm> . This change results in no change in emissions. The administrative change will affect changes to **AQ-56, AQ-58-62, and AQ-64**. The change will require the letter A to be stricken, and the letter B to be inserted as seen in the conditions changes to follow.

## CONCLUSIONS AND RECOMMENDATIONS

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- Added new language to better define a leak in the Ullage System with a quantifiable value of 100 ppm for the HTF Ullage Expansion Tank in **AQ-17(e)**.
- An administrative change for above ground gasoline dispensing storage tank pursuant to CARB Executive Order (EO) –VR-401-A has been superseded with EO –VR-401-B and will require changes to **AQ-56, AQ-58 to AQ-62, and AQ-64**.
- The rearrangement and minor changes of equipment located in the power blocks at BSPP should not substantially change the modeled impacts, nor alter the conclusions reached by the Energy Commission in its Decision.



- There are no recommended changes to the Conditions of Certification necessary to ensure BSPP air quality impacts are mitigated to less than significant levels or to ensure the BSPP will comply with all applicable LORS.

## **AMENDED AND PROPOSED CONDITIONS OF CERTIFICATION**

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Below is a list of the revised Air Quality Conditions of Certification, which were originally contained in the Decision for BSPP (Decision 2010). The MDAQMD issued an ATC and changes for consistency are included below as Air Quality Conditions of Certification. Strikeout is used to indicate deleted language and **underline and bold** is used for new language.

Conditions of Certification that will be amended by this amendment request:

- Added new language to better define a leak in the Ullage System with a quantifiable value of 100 ppm for the HTF Ullage Expansion Tank in **AQ-17(e)**.
- An administrative change for above ground gasoline dispensing storage tank pursuant to CARB Executive Order (EO) –VR-401-A has been superseded with EO –VR-401-B and will require changes to **AQ-56, AQ-58 to AQ-62, and AQ-64**.

## **CHANGED CONDITIONS OF CERTIFICATION**

### **Ullage System Condition**

#### **EQUIPMENT DESCRIPTION:**

Four - HTF ullage expansion tanks, Application Number: 0010750, 0010757, 0010764 and 0010771.

- AQ-17** The project owner shall establish an inspection and maintenance program to determine, repair, and log leaks in HTF piping network and expansion tanks. Inspection and maintenance program and documentation shall be available to District staff upon request.
- a. All pumps, compressors and pressure relief devices (pressure relief valves or rupture disks) shall be electronically, audio, or visually inspected once every operating day.
  - b. All accessible valves, fittings, pressure relief devices (PRDs), hatches, pumps, compressors, etc. shall be inspected quarterly using a leak detection device such as a Foxboro OVA 108 calibrated for methane.
  - c. Inspection frequency for accessible components, except pumps, compressors and pressure relief valves, shall be increased to quarterly when more than two percent of the components within a component type are found to leak during any inspection for five consecutive quarters.
  - d. Inspection frequency for accessible components, except pumps, compressors and pressure relief valves, shall be increased to quarterly

when more than two percent of the components within a component type are found to leak during any inspection or report.

- e. ~~If any evidence of a potential~~ a leak **greater than 100 ppm above background** is found, the **leaking component** ~~indication of the potential~~ leak shall be **repaired, replaced or removed** ~~eliminated~~ within 7 calendar days of detection.

**Verification:** The inspection and maintenance plan shall be submitted to the CPM for review and approval at least 30 days before taking delivery of the HTF. As part of the Annual Compliance Report, the project owner shall provide the quantity of used HTF fluid removed from the system and the amount of new HTF fluid added to the system each year. The project owner shall make the site available for inspection of HTF piping Inspection and Maintenance Program records and HTF system equipment by representatives of the District, ARB, and the Energy Commission.

### **Non-Retail Gasoline Dispensing Facility Conditions**

#### **EQUIPMENT DESCRIPTION:**

One – above ground gasoline storage tank and fuel receiving and dispensing equipment, Application Number: 0011391.

**AQ-56** The project owner shall maintain a log of all inspections, repairs, and maintenance on equipment subject to Rule 461. Such logs or records shall be maintained at the facility for at least two (2) years and available to the District upon request. Records of Maintenance, Tests, Inspections, and Test Failures shall be maintained and available to District personnel upon request; record form shall be similar to the Maintenance Record form indicated in EO VR-401-~~AB~~, Figure 2N.

**Verification:** The project owner shall make the site available for inspection of equipment and fuel purchase records by representatives of the District, ARB, and the Energy Commission.

**AQ-58** Pursuant to EO VR-401-~~AB~~, vapor vent pipes are to be equipped with Husky 5885 pressure relief valves or as otherwise allowed by EO.

**Verification:** The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

**AQ-59** The project owner shall perform the following tests within 60 days of construction completion and annually thereafter in accord with the following test procedures:

- a. Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks shall be conducted per EO VR-401-~~AB~~ Exhibit 4;

- b. Phase I Adapters, Emergency Vents, Spill Container Drain Valve, Dedicated gauging port with drop tube and tank components, all connections, and fitting shall NOT have any detectable leaks; test methods shall be per EO VR-401--**AB** Table 2-1, and
- c. Liquid Removal Test (if applicable) per TP-201.6, and

Summary of Test Data shall be documented on a Form similar to EO VR-401-**AB** Form 1.

The District shall be notified a minimum of 10 days prior to performing the required tests with the final results submitted to the District within 30 days of completion of the tests.

The District shall receive passing test reports no later than six (6) weeks prior to the expiration date of this permit.

**Verification:** The project owner shall make the site available for inspection of equipment and the results for the tests required by this condition by representatives of the District, ARB, and the Energy Commission.

**AQ-60** Pursuant to California Health and Safety Code sections 39600, 39601 and 41954, this aboveground tank shall be installed and maintained in accordance with Executive Order (EO) VR-401--**AB** for EVR Phase I, and Standing Loss requirements.

<http://www.arb.ca.gov/vapor/eos/eo-vr401/eo-vr401a/eo-401a.pdf>

Additionally, Phase II Vapor Recovery System shall be installed and maintained per G-70-116-F with the exception that hanging hardware shall be EVR Balance Phase II type hanging hardware (VST or other CARB Approved EVR Phase II Hardware).

**Verification:** The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

**AQ-61** Pursuant to EO VR-401--**AB**; Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by OPW Certified Technicians.

**Verification:** The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

**AQ-62** Pursuant to EO VR-401--**AB**, Maintenance Intervals for OPW; Tank Gauge Components; Dust Caps Emergency Vents; Phase I Product and Vapor Adapters, and Spill Container Drain Valve, shall be conducted by an OPW trained technician annually.

**Verification:** The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

**AQ-64** The project owner shall; install, maintain, and operate EVR Phase I in compliance with CARB Executive Order VR-401-~~AB~~, and Phase II vapor recovery in accordance with G-70-116-F. In the event of conflict between these permit conditions and/or the referenced EO's the more stringent requirements shall govern.

**Verification:** The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

## REFERENCES

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ARB - California Air Resources Board, Ambient Air Quality Standards, Area Designations <http://www.arb.ca.gov/desig/desig.htm> June 2011.

BSP 2011 – Blythe Solar Power Project Amendment (09-AFC-6C). June 2011. Received June 14, 2011.

CEC 2010 - California Energy Commission, Revised Staff Assessment of Blythe Solar Power Project (09-AFC-6). June 4, 2010.

CEC 2010- California Energy Commission, Presiding Member's Proposed Decision, Blythe Solar Power Project (09-AFC-6), August 11, 2010.

MDAQMD 2010 – Mojave Desert Air Quality Management District, Authority to Construct, November, 2010.

**BLYTHE SOLAR POWER PROJECT (09-AFC-6)**  
**Petition to Amend Final Commission Decision**  
**BIOLOGICAL RESOURCES**  
**Joy Nishida**

## **INTRODUCTION**

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The Blythe Solar Power Project (BSPP) is located in the eastern Colorado Desert, approximately eight miles west of the City of Blythe and two miles north of the Interstate-10 freeway on land managed by the Bureau of Land Management (BLM) in Riverside County, California. The California Energy Commission (Energy Commission) approved the Blythe Solar Power Project (BSPP or project) in its Final Decision (Decision) dated September 15, 2010, Docket Number 09-AFC-6 (Decision). The project has received its Right-Of-Way Grant (ROW) and Notice to Proceed to construction (NTP) for Phase 1A from the BLM and a NTP from the Energy Commission for Phase 1A. Phase 1A of the BSPP is currently under construction.

The only significant project change that is being considered for this project amendment that could affect biological resources would be the impacts associated with the proposed re-alignment of the transmission line route to the proposed Colorado River Substation Southern Alternative (Southern Alternative). The Southern Alternative was approved at the July 14, 2011, California Public Utilities Commission (CPUC) meeting (CPUC 2011b). All other proposed modifications to the BSPP will be within the areas previously analyzed in the Commission Decision.

## **LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS) COMPLIANCE**

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There are no new or changed biological resource laws, ordinances, regulations, and standards that would be applicable to the amended project as proposed.

## **ANALYSIS AND SETTING**

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This analysis is based, in part, on information provided in the Blythe Solar Power Project Amendment (09-AFC-6) (Solar Millennium 2011), the Revised Staff Assessment of Blythe Solar Power Project (09-AFC-6) (CEC 2010a), the Supplemental Staff Assessment of Blythe Solar Power Project (09-AFC-6) (CEC 2010b), Blythe Solar Power Project Commission Decision (CEC 2010c), California Public Utilities Commission Proposed Decision Granting Southern California Edison Company A Permit To Construct The Colorado River Substation Expansion Project (CPUC 2011a), Blythe Solar Power Project Biological Resources Technical Report, Riverside County, California (Solar Millennium 2010), and e-mail communication between staff and consultants to Solar Millennium (AECOM 2011).

The Colorado River Substation Southern Alternative is approximately 0.75 mile south of the originally proposed location (CPUC 2011a). The proposed re-aligned transmission line to the Southern Alternative will still impact desert tortoise habitat in Sonoran creosote scrub brush and Mojave fringed-toed lizard (MFTL) habitat in stabilized and partially stabilized desert dune habitats as did the transmission line previously analyzed in the Commission Decision. The new transmission line interconnection to the Southern Alternative will decrease impacts to desert tortoise habitat by 1 acre. Impacts to Mojave fringed-toed lizard (MFTL) habitat will also result in 8 acres less disturbance with the transmission line interconnection to the Southern Alternative. The decrease in habitat impact acreages is due to reduced right-of-way widths along portions of the transmission line route and slightly shorter transmission line distance to the Southern Alternative substation site than the originally analyzed Colorado River Substation site (AECOM 2011).

The decreased acreage impacts to desert tortoise and MFTL habitats are reflected in staff's proposed modifications to Conditions of Certification **BIO-12**, **BIO-20**, and **BIO-28**. Condition of Certification **BIO-28** contains three tables with phased impact and mitigation acreages for special status species and waters of the state. Acreage impact changes for desert tortoise and MFTL habitats are proposed for the first table. The third table regarding waters of the state and bighorn sheep impact and mitigation acreages will remain the same, however, the second table is a mislabeled and incorrectly totaled version of the third table and staff proposes that it be removed.

### **Special Status Species**

The desert tortoise and the Mojave fringe-toed lizard continue to be the primary sensitive species that need to be addressed in this amendment analysis. No additional or new special status species were added to the table published in the Commission Decision (CEC 2010c) as a result of biological surveys conducted along previously unsurveyed segments of the transmission line for the amendment (Solar Millennium 2011).

## **CONCLUSIONS AND RECOMMENDATIONS**

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The amended project would continue to conform to all applicable laws, ordinances, regulations, and standards (LORS) for biological resources. The proposed project changes associated with a new substation location and a slightly re-aligned transmission line would not result in significant, unmitigated effects on special status species or their habitat with implementation of the Biological Resources conditions of certification in the Commission Decision. Staff recommends changes to three conditions in the Commission Decision to reflect the reduced acreage impacts to desert tortoise and Mojave fringed-toed lizard habitat.

## PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

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Below are the proposed modifications to conditions of certification contained in the Commission Decision that apply to the BSPP amendment. Changes are incorporated into Biological Resources Conditions of Certification **BIO-12**, **BIO-20**, and **BIO-28**. ~~Strikethrough~~ is used to indicate deleted language and underline for new language. The changes to the conditions of certification for the BSPP amendment are as follows:

- Condition of Certification **BIO-12** is revised to reflect the decrease in impact acreage to desert tortoise habitat that would be associated with construction of the transmission line to the Colorado River Substation Southern Alternative.
- Condition of Certification **BIO-20** is revised to reflect the decrease in impact acreages to MFTL habitat that would be associated with construction of the transmission line to the Colorado River Substation Southern Alternative.
- Condition of Certification **BIO-28** is revised to reflect the changes in impact acreages to desert tortoise and MFTL habitat, from the Colorado River Substation Southern Alternative in the table with impact and mitigation acreages for desert tortoise, MFTL, and western burrowing owl. Staff also proposes that the second table in **BIO-28** from the Commission Decision which only includes desert tortoise and MFTL impact and mitigation acreages is in error and should be deleted. The second table is also mislabeled and incorrectly totaled as it was originally for direct and indirect impacts to state waters and impact and mitigation acreages for bighorn sheep. The third table from the Decision is the correct version of the second table and will remain in the condition.

### DESERT TORTOISE COMPENSATORY MITIGATION

**BIO-12** To fully mitigate for habitat loss and potential take of desert tortoise, the Project owner shall provide compensatory mitigation at a 1:1 ratio for impacts to ~~6,958~~ 6,957 acres, adjusted to reflect the final Project footprint....

### SAND DUNE/FRINGE-TOED LIZARD MITIGATION

**BIO-20** To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards the Project owner shall provide compensatory mitigation at a 3:1 ratio, which may include compensations lands purchased in fee or in easement in whole or in part, for impacts to stabilized or partially stabilized desert dune habitat (~~5850~~ acres or the acreage of sand dune/partially stabilized sand dune habitat impacted by the final Project footprint from the Project interconnection to the Colorado River Substation Southern Alternative). If compensation lands are acquired....

### PROJECT CONSTRUCTION PHASING PLAN

**BIO-28** The project Owner shall provide compensatory mitigation for the total Project Disturbance Area and may provide such mitigation in three phases, Phase 1a, Phase 1b, and Phase 2, as described in Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation (Galati & Blek [tn:57593]. Palo

Verde Solar 1, LLC's Proposed Phased Construction and Mitigation: Blythe Solar Power Project Docket No. (09-AFC-6), dated July 15, 2010.)....

For Interconnection to Colorado River Substation Southern Alternative:

Phase	Desert Tortoise		MFTL		WBO	
	Impact (acres)	Mitigation (acres)	Impact (acres)	Mitigation (acres)	Impact (individuals/pairs)	Mitigation(acres)
Phase 1a	769	769	0	0	0	0
Phase 1b	2,995 <u>2,994</u>	2,995 <u>2,994</u>	58 <u>50</u>	174 <u>151</u>	1	19.5
Phase 2	3,193	3,193	0	0	1	19.5
Total	6,958 <u>6,957</u>	6,958 <u>6,957</u>	58 <u>50</u>	174 <u>151</u>	2	39

Phase	Desert Tortoise		MFTL	
	Impact (acres)	Mitigation (acres)	Impact (acres)	Mitigation (acres)
Phase 1a	67	130	0	0
Phase 1b	231	409	36	51
Phase 2	294	665	146	189
Total	593	1,205	133	179

## REFERENCES

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Solar Millennium. 2010. Solar Millennium (tn: 57200). Blythe Solar Power Project Biological Resources Technical Report, Riverside County, California. Submitted to California Energy Commission Docket Unit on June 15, 2010.

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