

Memorandum

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California Energy Commission

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Subject: **BLYTHE SOLAR POWER PROJECT AMENDMENT (09-AFC-6C)**
ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Blythe Solar Power Project Amendment. This report serves as a preliminary scoping document that identifies issues that Energy Commission staff believes will require careful attention and consideration.

Attachment

cc: Docket 09-AFC-6C

**ISSUES IDENTIFICATION REPORT
BLYTHE SOLAR POWER PROJECT AMENDMENT
(09-AFC-6C)**

TABLE OF CONTENTS

PURPOSE OF THE REPORT	1
AMENDMENT PROCESS	1
PROJECT DESCRIPTION	1
SUMMARY OF THE PROJECT APPROVED ON SEPTEMBER 15, 2010	2
SUMMARY OF PROPOSED PROJECT MODIFICATIONS	3
SUMMARY OF MODIFIED PROJECT CONSTRUCTION ACTIVITIES	5
SUMMARY OF MODIFIED PROJECT OPERATIONS	5
COLLABORATION WITH THE BUREAU OF LAND MANAGEMENT	5
POTENTIAL MAJOR ISSUES	5
SOILS AND WATER RESOURCES	6
STATUS REPORTS	6
ELECTRONIC FILING	7
PROJECT SCHEDULE	8

ISSUES IDENTIFICATION REPORT

Energy Commission Staff Report

PURPOSE OF THE REPORT

This report has been prepared by the California Energy Commission (Energy Commission) staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of discussions with federal, state, and local agencies, and review of the Revised Petition to Amend filed by NextEra Blythe Solar Energy Center, LLC (NextEra Blythe Solar) on April 12, 2013.

The Issues Identification Report contains a project description, summary of potentially significant environmental and engineering issues, and a discussion of the proposed project schedule. Energy Commission staff will continue to address the status of issues and progress towards their resolution in periodic reports to the Committee.

AMENDMENT PROCESS

The Blythe Solar Power Project (BSPP) Revised Petition to Amend will be processed as an amendment to the Blythe Solar Power Project Final Decision that was certified by the Energy Commission on September 15, 2010. The purpose of the Energy Commission's review process is to assess the impacts of this proposal on environmental quality and on public health and safety. The review process includes an evaluation of the consistency of the proposed changes with the Energy Commission's Decision and a determination on whether the project, as modified, will remain in compliance with applicable laws, ordinances, regulations, and standards (Title 20, Calif. Code of Regulations, section 1769).

PROJECT DESCRIPTION

On April 12, 2013, NextEra Blythe Solar filed a revised petition with the Energy Commission requesting to modify the BSPP Final Decision. The revised petition can be found on the Energy Commission's webpage at:

http://www.energy.ca.gov/sitingcases/blythe_solar/pv_amendment/index.html. The project was licensed by the Energy Commission as a 1,000-megawatt (MW) solar thermal power-generating facility utilizing parabolic trough technology. The approved project site, approximately 7,043 acres in size, is located approximately 8 miles west of the City of Blythe and 2 miles north of the Interstate-10 freeway, on land managed by the Bureau of Land Management (BLM) in Riverside County, California.

The Final Decision allowed the BSPP to be constructed in phases. The BLM published the Plan Amendment/Record of Decision (PA/ROD) on October 22, 2010, and issued the Right-of-Way (ROW) Grant on November 4, 2010. On November 4, 2010, the original project owner, Palo Verde Solar I, LLC (PVSI), obtained a Notice to Proceed from the

Energy Commission Compliance Project Manager for construction of Phase 1A of the BSPP and immediately began construction.

PVSI continued construction of portions of Phase 1A until August 2011. In a letter dated August 25, 2011, PVSI advised the Energy Commission and the BLM that it would cease construction activities on the BSPP site and would seek to amend the Final Decision and the ROW Grant to allow construction and operation of photovoltaic (PV) technology on the site. This letter outlined maintenance activities that would continue on the site to ensure site security and prevent off-site environmental impacts. The Energy Commission and the BLM approved a maintenance plan and associated activities on September 8, 2011.

On October 4, 2011, the Legislature passed, and the Governor signed into law, SB 226 (Chapter 469, Statutes of 2011). SB 226 added Section 25500.1 to the Public Resources Code, authorizing the Energy Commission to review and amend a solar thermal power plant license to include the use of PV technology. Section 25500.1 applied only to projects that met certain requirements. The BSPP meets all of the requirements of Section 25500.1.

On June 14, 2011, PVSI filed a petition requesting to modify the BSPP by replacing the solar thermal trough technology completely with photovoltaic (PV) generating technology. In November 2011, BSPP completed the acquisition of 858.5 agency-approved acres of off-site mitigation land—89.5 acres more than the 769 acres required for Phase 1A per Condition of Certification (COC) **BIO-28**. On June 25, 2012, the Energy Commission received an Application for Change in Ownership and subsequently approved this request on July 11, 2012. PVSI sold the project to NextEra Blythe Solar in July 2012. In September 2012, NextEra Blythe Solar received Energy Commission and BLM approval of a revised maintenance plan, and in December 2012, NextEra Blythe Solar completed a key component of that plan, which involved dismantling several miles of desert tortoise/silt fencing.

SUMMARY OF THE PROJECT APPROVED ON SEPTEMBER 15, 2010

The Approved BSPP was to consist of four adjacent, independent, and identical units of 250-MW nominal capacity each for a total nominal capacity of 1,000 MW. The proposed total acreage for the site was approximately 7,025 acres of BLM land, including linear facilities. The project was to utilize solar parabolic trough technology to generate electricity. With this technology, arrays of parabolic mirrors would 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) would be brought to high temperature (750°F) as it circulated through the receiver tubes. The HTF would then be piped through a series of heat exchangers where it would release its stored heat to generate high pressure steam. The steam would then be fed to a traditional steam turbine generator where electricity would be produced. Dry cooling technology would be used. Individual components of the approved project included:

- Solar Field and Power Block #1 (northeast);

- Solar Field and Power Block #2 (northwest);
- Solar Field and Power Block #3 (southwest);
- Solar Field and Power Block #4 (southeast);
- Access road to on-site office from and upgrades to a portion of Black Rock Road;
- Warehouse/maintenance building, assembly hall, and laydown area;
- Telecommunications lines;
- Natural gas pipeline;
- Concrete batch plant;
- Fuel depot;
- On-site transmission facilities, including central internal switchyard;
- 230 kilovolt (kV), double-circuit gen-tie line interconnecting to the Colorado River Substation (CRS);
- Groundwater wells used for water supply; and
- Distribution/construction power line.

SUMMARY OF PROPOSED PROJECT MODIFICATIONS

The Modified BSPP includes replacing the solar thermal technology completely with PV generating technology and reducing the physical size of the project. Linear access to the site would be the same as the Approved BSPP, and the Modified BSPP would continue to interconnect to the regional transmission grid via the same proposed gen-tie line to Southern California Edison's (SCE's) CRS, which is currently under construction.

NextEra Blythe Solar proposes to develop the BSPP in four operational phases designed to generate a total of approximately 485 MW of electricity. The first three units (phases) would consist of approximately 125 MW alternating current (AC) each. The fourth unit would generate approximately 110 MW AC. The transmission corridor is located in the center of the site with the exact location to be determined during final design.

NextEra Blythe Solar has not selected the specific PV modules nor has it decided on whether a tracker system, fixed-tilt system, or combination of the two systems would be installed. NextEra Blythe Solar is requesting the Final Decision be amended in such a way as to allow the specific combination of technologies to be selected prior to construction without the need for filing another amendment.

During operations, all four units would share an operations and maintenance facility, one on-site switchyard, access and maintenance roads (either dirt, gravel, or paved), perimeter fencing and other ancillary security facilities, and a 230-kV gen-tie line.

The Modified BSPP would be located entirely on public land within BLM ROW #CACA-048811. The total proposed acreage for the solar plant site is approximately 4,070 acres, excluding linear facilities outside of the proposed solar plant site.

The primary modifications to the Approved BSPP are as follows:

- The previously planned four power blocks (which each included a steam turbine, evaporation pond, auxiliary boiler, air-cooled condenser, and equipment) and structures have been eliminated.
- The Land Treatment Units for HTF have been eliminated.
- The HelioTrough energy collection systems and associated HTF piping systems have been eliminated and replaced with PV panels configured for either horizontal tracking or fixed-tilt operations.
- The substation has been replaced by a switchyard which is located near the center of the disturbance area.
- The large assembly hall has been eliminated.
- The concrete batch plant has been eliminated.
- The natural gas line has been eliminated.
- The water treatment system has been reduced in size to accommodate a reduction in water usage. Consequently, the associated waste quantities have been reduced and the number of evaporation ponds have been reduced from eight ponds to two.
- The large drainage structures surrounding the site have been eliminated, although smaller drainage features may be required.
- The amount of mass grading has been greatly reduced.
- The footprint has been modified to allow transmission and access road corridors to accommodate the NextEra McCoy and the EDF Renewable Energy¹ projects proposed to the north of the BSPP.
- Water use during construction has been reduced from approximately 4,100 acre-feet (AF) to 700 to 1,200 AF.
- Water use during operations has been reduced from approximately 600 acre-feet per year (AFY) to between 30 and 40 AFY.

The list above largely encompasses the items that were eliminated or reduced by the switch in technology from parabolic trough/concentrating solar thermal to PV technology. There would also be approximately 3,000 acres reduction in the size of the BSPP footprint.

¹ EDF Renewable Energy is the U.S. subsidiary of EDF Energies Nouvelles. EDF Energies Nouvelles is the renewable energy arm of the EDF group, a world-wide electricity company.

SUMMARY OF MODIFIED PROJECT CONSTRUCTION ACTIVITIES

The construction of the Modified BSPP would begin after all applicable approvals and permits have been obtained, currently anticipated to be as early as June 2014, and after the preconstruction surveys, construction mobilization, and site preparation are completed. Work would be completed in phased stages moving across the site so that completion of the first phase and gen-tie line is closely followed by the beginning of the next. Construction of all of the phases is anticipated to take approximately 48 months from the commencement of the construction process to completion of the BSPP.

SUMMARY OF MODIFIED PROJECT OPERATIONS

The proposed Modified BSPP would employ approximately 15 to 20 permanent, full-time personnel at the solar plant site during daytime working hours, assuming all units are operational. Temporary personnel would be employed, as needed, during seasonal periods when panel washing is required. Monthly visual inspections and annual (minimum) preventive maintenance would be performed. In accordance with United States Department of Labor, Occupational Safety and Health Administration safety regulations, at least two qualified personnel would be present during all energized electrical maintenance activities at the facility. Site security systems would be monitored regularly by on-site personnel and an off-site 24-hour Remote Operations Center.

COLLABORATION WITH THE BUREAU OF LAND MANAGEMENT

The Approved BSPP site is located entirely on land managed by the BLM. During the original BSPP proceeding in 2009 and 2010, Energy Commission staff and BLM staff worked closely together on the review and analysis of the project. The Energy Commission and BLM issued separate final documents for compliance with CEQA and NEPA, respectively. The Energy Commission issued its Final Decision on September 15, 2010. The BLM published the Plan Amendment/Record of Decision (PA/ROD) on October 22, 2010, and issued the ROW Grant on November 4, 2010. For the Modified BSPP to be constructed, a revised ROW grant from BLM will be required in addition to the amended certification from the Energy Commission.

The BLM has also received the revised project application for BSPP. NextEra Blythe Solar is currently working with the BLM on moving forward to amend the BLM's previously issued environmental document. Energy Commission staff will continue to work cooperatively with BLM staff to review the Modified BSPP, and ultimately the Energy Commission and BLM will issue separate Final Decisions.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report may not include all of the significant issues that may arise during the case, since discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based

on comments of other government agencies and on staff’s judgment on whether any of the following circumstances could occur:

- Potential significant impacts which may be difficult to mitigate;
- Potential areas of noncompliance with applicable laws, ordinances, regulations or standards (LORS);
- Areas of conflict or potential conflict between/among the parties; and
- Areas where resolution may be difficult or may affect the schedule.

The following table lists all of the subject areas evaluated and notes Air Quality, Alternatives, Biological Resources, Cultural Resources, Efficiency, Facility Design, Geological Hazards, Hazardous Materials Handling, Land Use, Noise, Paleontological Resources, Project Overview, Public Health, Reliability, Socioeconomics, Traffic and Transportation, Transmission Line Safety and Nuisance (TLSN), Transmission System Engineering (TSE), Visual Resources, Waste Management, and Worker Safety and Fire Protection as areas where no potentially significant issues have been identified. Identification of an area as having no potential issues does not mean that an issue could not arise related to the subject area during the course of the amendment review process. The table also notes that the Soil and Water Resources staff has currently identified a potentially significant issue. The table also indicates the subject areas in which staff, at the present time, expects to issue Data Requests (DRs). DRs in additional areas may become necessary as the case progresses.

Subject Area	Major Issues	DRs	Subject Area	Major Issues	DRs
Air Quality	No	No	Project Overview	No	No
Alternatives	No	No	Public Health	No	Yes
Biological Resources	No	Yes	Reliability	No	No
Cultural Resources	No	No	Socioeconomics	No	No
Efficiency	No	No	Soils and Water Resources	Yes	Yes
Facility Design	No	No	Traffic and Transportation	No	No
Geological Hazards	No	No	TLSN	No	No
Hazardous Materials Handling	No	Yes	TSE	No	Yes
Land Use	No	No	Visual Resources	No	No
Noise	No	No	Waste Management	No	Yes
Paleontological Resources	No	No	Worker Safety and Fire Protection	No	Yes

Staff needs to determine the analysis required that would permit the project owner to receive an amended decision allowing the specific combination of technologies to be selected prior to construction without the need for filing another amendment.

SOILS AND WATER RESOURCES

The Modified BSPP proposes substantial changes to the site hydrology compared to the Approved BSPP. The Modified BSPP removes the three major drainage channels from

the Approved BSPP that were designed to route the surface water through and around the entire field of solar troughs. Instead, the PV technology of the Modified BSPP would allow most flows to maintain existing, pre-project natural drainage patterns through the solar fields. In addition, the PV technology would not require the entirely flat surface that solar trough technology needed, so extensive grading would be avoided.

Although the Modified BSPP would reduce the impacts of water diversion and grading compared to the Approved BSPP, the substantial changes in hydrology could potentially create a new set of issues that were not analyzed during assessment of the Approved BSPP. Of particular concern to staff is the potential for erosion during construction and the potential for scour at the base of PV panel supports. These impacts are specific to the Modified BSPP and were not previously analyzed in the Energy Commission Final Decision. NextEra Blythe Solar did not mention these potential impacts in its Petition to Amend, nor did it identify any mitigation measures. A construction Storm Water Pollution Prevention Plan (SWPPP) has not yet been submitted to staff, even in draft form. This document is needed to assess potential impacts of the Modified BSPP. A delay in receiving this information could result in a delay in completing the Staff Assessment.

The Modified BSPP would eliminate the use of HTF and reduce the amount of process waste water compared to the Approved BSPP. As a result, the Modified BSPP would reduce the number of evaporation ponds, from eight 4-acre to two 6-acre evaporation ponds. Although this would be a reduction of impacts, it would require revised Waste Discharge Requirements (WDRs) to reflect the Modified BSPP. This process must be coordinated with the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB). A delay in this process could result in a delay in the Modified BSPP's operational start date. Staff has contacted the CRBRWQCB to inquire if they have received a revised application from the applicant or if a representative of NextEra Blythe Solar has contacted the regional board to start the process. CRBRWQCB indicated to staff that no revised documents have been submitted to the regional board, nor have representatives of NextEra Blythe Solar contacted the board to alert them about the changes.

STATUS REPORTS

Based on the Committee Scheduling Order filed on May 15, 2013, staff will file status reports on June 17, 2013, and August 13, 2013, to keep the Modified BSPP Amendment Committee apprised of staff and applicant progress.

ELECTRONIC FILING

Staff requests that the Modified BSPP Amendment Committee allow the staff documents to be served electronically. Parties also wanting a hard copy may request it in addition to the electronic copy. This is requested to expedite the distribution of materials and reduce the amount of paper used and time spent duplicating paper documents in this proceeding.

PROJECT SCHEDULE

The Committee Scheduling Order was issued on May 15, 2013. Meeting this schedule will depend on: the applicant's timely response to staff's data requests; determinations by other local, state and federal agencies; the submittal of required applications, and other factors not yet known.

COMMITTEE SCHEDULE

Blythe Solar Power Project Amendment (09-AFC-6C)

ACTIVITY	DATE
Applicant files Petition For Amendment	06/29/12
Applicant files Revised Petition For Amendment	04/12/13
Staff files Data Requests	05/24/13
Applicant files responses to Data Requests; Parties file Status Reports	06/17/13
Staff Assessment filed	07/15/13
Staff Assessment Comment Period Closes; Parties file Status Reports	08/13/13
Staff Assessment Workshop	08/21/13*
Supplemental Staff Assessment (if necessary)	09/13/13
Committee Hearing on the Staff Assessment	10/07/13*
Proposed Decision	11/08/13
Final Decision Adoption Hearing	First Business Meeting in December

*estimated dates; separate written notice will be provided



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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***BLYTHE SOLAR POWER
PROJECT AMENDMENT***

Docket No. 09-AFC-6C

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(EST. 5/09/2013)**

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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
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Commissioner and Associate Member

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Hearing Adviser

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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 Issues Identification Report 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/.

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
