

DOCKETED

Docket Number:	09-AFC-05C
Project Title:	Abengoa Mojave Compliance
TN #:	203179
Document Title:	Staff Analysis of Amendment Proposal
Description:	Cover Letter and Analysis
Filer:	Dale Rundquist
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/9/2014 9:36:56 AM
Docketed Date:	10/9/2014

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov



DATE: October 7, 2014

TO: Interested Parties

FROM: Dale Rundquist, Compliance Project Manager

**SUBJECT: Abengoa Mojave Solar Project (09-AFC-5C)
Staff Analysis of Amendment Proposal(s)**

On August 15, 2014, Mojave Solar LLC (MSLLC) filed a petition with the California Energy Commission (Energy Commission) requesting to amend the Final Decision for the Abengoa Mojave Solar (AMS) Project. The modification proposed in the petition would revise Condition of Certification **AQ-25** to provide a different method of measuring the levels of total dissolved solids (TDS) in the cooling tower blow-down water from the project. Staff prepared an analysis of this proposed change that can be reviewed on the Energy Commission website for this facility (see below).

The AMS Project, a solar thermal, 250-megawatt facility, was certified by the Energy Commission in its Decision on September 8, 2010, and is currently under construction and is 99 percent complete. The facility is located near Hinkley, in San Bernardino County, California.

Energy Commission staff (staff) reviewed the petition and assessed the impacts of this proposal on environmental quality and on public health and safety. In the Staff Analysis, staff proposes revised Air Quality Conditions of Certification **AQ-25, AQ-26** and **AQ-28**. It is staff's opinion that, with the implementation of these revised conditions, the facility would remain in compliance with applicable laws, ordinances, regulations, and standards, and the proposed changes to conditions of certification would not result in any significant, adverse, direct, indirect, or cumulative impacts to the environment (20 Cal. Code of Regs., § 1769). Energy Commission staff intends to recommend approval of the petition at the November 12, 2014 Business Meeting of the Energy Commission.

The Energy Commission's webpage for this facility, <http://www.energy.ca.gov/sitingcases/abengoa/>, has a link to the petition and the Staff Analysis on the right side of the webpage in the box labeled "Compliance Proceeding." Click on the "Documents for this Proceeding (Docket Log)" option. After the Final Decision, the Energy Commission's Order regarding this petition will also be available on the same webpage.

This notice has been mailed to the Energy Commission's list of interested parties and property owners adjacent to the facility site. It has also been e-mailed to the facility listserv. The listserv is an automated Energy Commission e-mail system by which

information about this facility is e-mailed to parties who have subscribed. To subscribe, go to the Commission's webpage for this facility, cited above, scroll down the right side of the project webpage to the box labeled "Subscribe," and provide the requested contact information.

Any person may comment on the Staff Analysis. Those who wish to comment on the analysis are asked to submit comments within 30 days of the date of this notice. To use the Energy Commission's electronic commenting feature, go to the Energy Commission's webpage for this facility, cited above, click on the "Submit e-Comment" link, and follow the instructions in the on-line form. Be sure to include the facility name in your comments. Once submitted, the Energy Commission Dockets Unit reviews and approves your comments, and you will receive an e-mail with a link to them.

Written comments may also be mailed or hand-delivered to:

California Energy Commission
Dockets Unit, MS-4
Docket No. 09-AFC-5C
1516 Ninth Street
Sacramento, CA 95814-5512

All comments and materials filed with and approved by the Dockets Unit will be added to the facility Docket Log and become publicly accessible on the Energy Commission's webpage for the facility.

If you have questions about this notice, please contact Dale Rundquist, Compliance Project Manager, at (916) 651-2072, or by fax to (916) 654-3882, or via e-mail to dale.rundquist@energy.ca.gov.

For information on participating in the Energy Commission's review of the petition, please call the Public Adviser at (800) 822-6228 (toll-free in California) or send your e-mail to publicadviser@energy.ca.gov. News media inquiries should be directed to the Energy Commission Media Office at (916) 654-4989, or by e-mail to mediaoffice@energy.ca.gov.

Mail List 7362
Abengoa Listserv

ABENGOA MOJAVE SOLAR PROJECT (09-AFC-5C)
Petition to Modify the Final Decision
EXECUTIVE SUMMARY
Prepared by Dale Rundquist

INTRODUCTION

On August 15, 2014, Mojave Solar, L.L.C. (MSLLC), filed a petition with the California Energy Commission (Energy Commission) requesting to amend the Final Decision for the Abengoa Mojave Solar (AMS) Project. The modification proposed in the petition would revise Condition of Certification **AQ-25** to provide a different method of measuring the levels of total dissolved solids (TDS) in the cooling tower blow-down water from the project.

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

Energy Commission staff (staff) has completed its review of all materials received. The Staff Analysis below is staff's assessment of the project owner's proposal to modify the project description.

Mojave Desert Air Quality Management District also made some minor condition language changes to **AQ-26** and **AQ-28**, which do not affect emission limits or air quality impacts. These changes are also included in this analysis.

PROJECT LOCATION AND DESCRIPTION

The 250-megawatt facility was certified by the Energy Commission in its Decision on September 8, 2010. The AMS Project is currently under construction and is approximately 99 percent complete. The facility is located near Hinkley, in San Bernardino County, California.

DESCRIPTION OF PROPOSED MODIFICATIONS

The petition to amend requests a modification to **AQ-25** to change the method of measuring the TDS levels in the blow down water. MSLLC is proposing to use a portable meter to obtain TDS values of the cooling tower blow-down water.

NECESSITY FOR THE PROPOSED MODIFICATIONS

The proposed modification to **AQ-25** would allow MSLLC to utilize a more efficient way to measure the TDS levels in the cooling tower blow-down water. Use of the portable meter is consistent with industry standards for measuring TDS levels.

STAFF'S ASSESSMENT OF THE PROPOSED PROJECT CHANGES

The technical area sections contained in this Staff Analysis include staff-recommended changes to the existing conditions of certification. Staff believes the proposed modifications to **AQ-25**, **AQ-26**, and **AQ-28** will allow MSLLC to utilize a more efficient way to measure the TDS levels in the cooling tower blow-down water.

Staff's conclusions in each technical area are summarized in **Executive Summary Table 1**, below.

Energy Commission technical staff reviewed the petition for potential environmental effects and consistency with applicable LORS. Staff has determined that the technical or environmental areas of Biological Resources, Cultural Resources, Facility Design, Geological Hazards and Resources, Hazardous Materials Management, Industrial Safety and Fire Protection, Land Use, Noise and Vibration, Paleontological Resources, Public Health, Socioeconomics, Soil and Water, Traffic and Transportation, Transmission Line Safety and Nuisance, Transmission System Engineering, Visual Resources, Waste Management 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 for these areas.

Staff determined, however, that the technical area of Air Quality would be affected by the proposed project changes and has proposed modifications to Conditions of Certification **AQ-25**, **AQ-26**, and **AQ-28** in order to assure compliance with LORS and to reduce potential environmental impacts to a less than significant level. The proposed Conditions of Certification **AQ-25**, **AQ-26**, and **AQ-28** are provided in the Air Quality Staff Analysis section below.

Executive Summary Table 1
Summary of Impacts for Each Technical Area

TECHNICAL AREAS REVIEWED	STAFF RESPONSE			Revised Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact*	Process As Amendment	
Air Quality			X	X
Biological Resources	X			
Cultural Resources	X			
Efficiency	X			

TECHNICAL AREAS REVIEWED	STAFF RESPONSE			Revised Conditions of Certification Recommended
	Technical Area Not Affected	No Significant Environmental Impact*	Process As Amendment	
Facility Design	X			
Hazardous Materials Management	X			
Land Use	X			
Noise & Vibration	X			
Paleontological Resources	X			
Public Health	X			
Socioeconomics	X			
Soil & Water Resources	X			
Traffic & Transportation	X			
Transmission Line Safety & Nuisance	X			
Transmission System Engineering	X			
Visual Resources	X			
Waste Management	X			
Worker Safety & Fire Protection	X			

*There is no possibility that the proposed modifications may have a significant effect on the environment, and the modifications will not result in a change in or deletion of a condition adopted by the Commission in the Final Decision, or make changes that would cause project noncompliance with any applicable laws, ordinances, regulations, or standards (20 Cal. Code Regs., § 1769 (a)(2)).

STAFF RECOMMENDATIONS AND CONCLUSIONS

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

- The proposed modification would not change the findings in the Energy Commission's Decision pursuant to Title 20, California Code of Regulations, section 1755;
- There would be no new or additional unmitigated, significant environmental impacts associated with the proposed modification;
- The facility would remain in compliance with all applicable laws, ordinances, regulations, and standards;

- The modification proposed in the petition would have no potential impacts to the environment;
- The proposed modification would be beneficial to the public because it will not adversely affect the public and will not change the conclusions regarding the environmental or public health impact of the project contained in the Final Decision; and
- The proposed modification is justified because it will allow MSLLC to utilize a more efficient way to measure the TDS levels in the cooling tower blow-down water.

ABENGOA MOJAVE SOLAR PROJECT (09-AFC-5C)
Petition for Modification of the Commission's Certification
AIR QUALITY ANALYSIS
Tao Jiang, Ph.D., P.E.

INTRODUCTION

On August 15, 2014, Mojave Solar, L.L.C. (MSLLC) filed a petition with the California Energy Commission (Energy Commission) to modify the certification for the Abengoa Mojave Solar Project (MS2014). The 250-megawatt solar thermal generation facility was certified by the Energy Commission on September 8, 2010. The power plant site encompasses 1,765 acres of land situated within unincorporated San Bernardino County, California.

The petition for modification proposes to modify Condition of Certification **AQ-25** to provide a different method of measuring the levels of total dissolved solids (TDS) in the blow down water from the project. Staff evaluated the proposed change and found it consistent with all applicable laws, ordinances, regulations and standards (LORS). Therefore, the proposed change does not result in any significant air quality impacts. Staff is also requesting additional minor wording changes to **AQ-26** and **AQ-28** to incorporate the wording used by the Mojave Desert Air Quality Management District (District) into these conditions.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS COMPLIANCE

At the time of certification, applicable LORS were identified in the Supplemental Staff Assessment (SSA). In addition, the U.S. Environmental Protection Agency (EPA) implemented a new 1-hour NO₂ standard of 0.1 ppm, evaluated as the ninety-eighth percentile of the daily maximum 1-hour value averaged over three years, which became effective on April 12, 2010. Therefore, the project's proposed amendment is subject to all the LORS described in the SSA, as well as the new 1-hour NO₂ federal standard.

ANALYSIS OF AMENDMENT REQUESTS

The current amendment requests a modification to **AQ-25** to change the method of measuring the TDS levels in the blow down water. Instead of weekly specific conductivity tests and quarterly tests to confirm the relationship between conductance and TDS, MSLLC is now proposing to use a portable meter to obtain TDS values of the cooling tower blow-down water. The portable meter will be utilized on a weekly basis to measure TDS values, and calibrated on a monthly basis in accordance with the applicable manufacturer guidelines. There will be no potential for a physical change to the environment as a result of this modification. The project is still required to meet the

TDS limits established in the Final Commission Decision. Therefore, this modification will not result in any significant air quality impacts.

In addition, the District made some minor condition language changes to **AQ-26** and **AQ-28**, which do not affect any emission limits or air quality impacts. These changes are also included in this amendment.

CONCLUSIONS AND RECOMMENDATIONS

The requested project change would conform to applicable federal, state, and District air quality LORS, and the amended project would not cause significant air quality impacts, provided that the conditions of certification in the following section are included. Staff recommends that the revised conditions of certification be approved as shown below.

AMENDED AND PROPOSED CONDITIONS OF CERTIFICATION

Below are the Conditions of Certification that must be revised from those approved in the 2010 Energy Commission Final Decision (CEC2010). ~~Strikethrough~~ is used to indicate deleted language and **underline and bold** is used for new language.

DISTRICT CONDITIONS

AQ-25 ~~The project owner shall perform weekly specific conductivity tests of the blow down water to indirectly measure total dissolved solids (TDS). Quarterly tests of the blow down water will be done to confirm the relationship between conductance and TDS. The~~ **total dissolved solids (TDS) from the blow-down water** shall not exceed 10,000 ppm on a calendar monthly basis. **To verify compliance, weekly TDS measurement will be performed using a Hach MP-6 portable meter (or equivalent as approved by the District). The meter must be calibrated monthly to manufacturer specifications.**

Verification: At least 30 days prior to the start of commercial operation, the project owner should submit to the CPM a copy of the meter specifications and the calibration methodology. ~~The cooling tower recirculation water TDS content test results shall be provided to representatives for the District, ARB, and the Energy Commission upon request.~~

AQ-26 ~~The project owner shall conduct all required cooling tower water tests~~ **measurements** in accordance with a District-approved ~~test~~ **measurement** and emissions calculation protocol. Thirty (30) days prior to the first such ~~test~~ **measurement** the project owner shall provide a written ~~test~~ **measurement** and emissions calculation protocol for District review and approval.

Verification: The project owner shall provide an emissions calculation and water sample ~~testing~~**measurement** protocol to the District for approval and CPM for review at least 30 days prior to the first cooling tower water ~~test~~**measurement**.

AQ-28 The project owner shall maintain an operations log for this equipment on-site and current for a minimum of five (5) years, and said log shall be provided to District personnel on request. The operations log shall include the following information at a minimum:

- a. Total operation time (hours per day, hours per month, and hours per rolling twelve month period); and
- b. The date and result of each blow-down water ~~test~~**measurement** in TDS ppm, and the resulting mass emission rate.

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

REFERENCES

CEC 2010 - California Energy Commission, Commission, *Commission Decision of the Abengoa Mojave Solar Project (09-AFC-5)*. dated 09/15/2010.

MS 2014—Mojave Solar, LLC. *Petition for Modification of the Commission's Certification of the Abengoa Mojave Solar Project*, dated 08/15/2014. Submitted to CEC/Dockets on 08/15/2014.