

LATHAM & WATKINS LLP

January 12, 2011

650 Town Center Drive, 20th Floor
Costa Mesa, California 92626-1925
Tel: +1.714.540.1235 Fax: +1.714.755.8290
www.lw.com

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DOCKET	
08-AFC-9	
DATE	JAN 12 2011
RECD.	JAN 12 2011

VIA FEDEX

File No. 039610-0003

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-9
1516 Ninth Street, MS-4
Sacramento, California 95814-5512

Re: City of Palmdale Hybrid Power Plant Project: Docket No. 08-AFC-9

Dear Sir/Madam:

Pursuant to California Code of Regulations, title 20, Sections 1209, 1209.5, and 1210, enclosed herewith for filing please find Applicant's Response to Final Staff Assessment.

Please note that the enclosed submittal was filed today via electronic mail to your attention and to all parties on the attached proof of service list.

Very truly yours,



Paul E. Kihm
Senior Paralegal

Enclosure

cc: 08-AFC-9 Proof of Service List (w/encl., via e-mail and U.S. Mail)
Michael J. Carroll, Esq. (w/encl.)
Marc T. Campopiano, Esq. (w/encl.)

Michael J. Carroll
Marc T. Campopiano
LATHAM & WATKINS LLP
650 Town Center Drive, Suite 2000
Costa Mesa, CA 92626
(714) 540-1235

STATE OF CALIFORNIA
ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:) DOCKET NO. 08-AFC-9
)
APPLICATION FOR CERTIFICATION,)
FOR THE PALMDALE HYBRID POWER) APPLICANT’S RESPONSE TO FINAL
PROJECT BY THE CITY OF PALMDALE) STAFF ASSESSMENT
)
_____)

On behalf of the City of Palmdale (“Applicant”) for the Palmdale Hybrid Power Plant Project (08-AFC-9) (“PHPP”), we hereby submit Applicant’s response to the Final Staff Assessment (“FSA”), issued by Staff for the California Energy Commission (“CEC”) on December 22, 2010. Applicant is filing this response to the FSA concurrently with, and as part of its testimony, in order to consolidate all apparent areas of disagreement with the Staff into a single document, and hopefully facilitate resolution of outstanding issues prior to the filing of Prehearing Conference Statements and the Evidentiary Hearings. Applicant’s response to the FSA is organized by topic area as follows:

- Executive Summary
- Air Quality
- Alternatives (comments only)
- Biology
- Geology and Paleontology
- Hazardous Materials
- Traffic & Transportation
- Transmission Line Safety & Nuisance
- Visual Resources
- Waste Materials

In certain cases, Applicant is proposing changes to the Staff testimony as set forth in the FSA or to proposed Conditions of Certification. In such cases, proposed deletions are made in ~~red strikethrough~~ text and proposed insertions are made in green underlined text.

I. EXECUTIVE SUMMARY

Applicant noted in comments on the PSA (Exhibit 99) that the PSA variously used a plant site acreage of 377, although 333 acres is the correct number. The FSA continues to refer to 377 acres in some sections, including the Executive Summary, p. 1-2 (*see also* Project Description, p. 3-1; Air Quality, p. 4.1-1; etc.). The actual plant site acreage is 333 acres.

II. AIR QUALITY

A. Offset Ratio for NOx and VOCs

The Applicant has proposed obtaining emission reduction credits (ERCs) from the San Joaquin Valley Air Pollution Control District (SJVAPCD) pursuant to an inter-basin, inter-district transfer to offset project emissions for NOx and VOCs. The FSA confirms that ozone violations in the Mojave Desert area are overwhelmingly caused by emissions from the San Joaquin Valley.¹ As such, the FSA acknowledges the Applicant's offset strategy is "a reasonable approach and has been done in the past."²

Rules promulgated by the Antelope Valley Air Quality Management District (AVAQMD) allow for inter-district/inter-basin ERC transfers to satisfy NOx and VOC offset requirements. AVAQMD Rule 1305(C)(3) establishes an offset ratio of 1:3:1 for inter-district/inter-basin transfers of NOx and VOCs. Past projects located in the Mojave Desert area have offset emissions with SJVAPCD-based ERCs in accordance with the AVAQMD rules.³

The FSA deviates from past precedent and AVAQMD rules by requiring a 1.5:1 offset ratio instead of the 1.3:1 ratio required by AVAQMD Rule 1305(C)(3). The FSA states, "An emissions offset ratio of 1.5:1 was selected by staff based on SJVAPCD Rule 2201, Table 4.2, which required a 1.5:1 for ERCs located '15 miles or more from the new or modified emissions unit's Stationary Source.'"⁴ Even though Staff acknowledges, "the AVAQMD is not bound by the SJVAPCD Rules and Regulations,"⁵ Staff applies the 1.5:1 offset ratio because "staff recommends that the Commission use the SJVAPCD Rules and Regulations as guidance for evaluating inter-district and inter-basin ERC transfers that involve large distances between the emission source and ERCs."⁶ Staff does not provide any precedent or guidance from the California Air Resources Board (CARB), SJVAPCD or AVAQMD to support applying SJVAPCD Rule 2201 to ERC transfers from the SJVAPCD to the AVAQMD instead of AVAQMD Rule 1305(C)(3).

The PHPP is located within the AVAQMD; thus, the AVAQMD rules apply, not the SJVAPCD rules. The AVAQMD has fully analyzed the offset ratio and determined on technical and legal bases that the 1.3:1 ratio is correct:

[AVAQMD] determination [regarding the necessary offset ratio

¹ FSA, p. 4.1-29.

² FSA, p. 4.1-30.

³ *See* Exhibit 110, Applicant's Response to Staff Status Report No. 8, at pp. 3-4 and Attachment C (examples of applicable past inter-district/inter-basin transfers).

⁴ FSA, p. 4.1-30.

⁵ *Id.*, p. 4.1-31.

⁶ *Id.*

for inter-district transfers] has been made “in the same manner and to the same extent as the district would do so for fully credited emissions reductions from sources located within its boundaries.” The District has properly determined the impact in compliance with the applicable provisions of District Rules 1302 and 1305 and such analysis is reflected in the FDOC. The District is statutorily precluded from performing a different impact analysis for this particular project based solely upon the fact that the proposed ERCs are not located within the District and the air basin, nor would any such additional analysis be warranted.⁷

District Counsel for the AVAQMD reiterated the agency’s support for the 1.3:1 offset ratio, and pointed out that the AVAQMD is specifically prohibited from applying a higher offset ratio by AVAQMD Rule 1305(C)(3).⁸

For the reasons outlined above, Applicant believes that AC-SC18 should be revised to conform to AVAQMD Rule 1305(C)(3) for inter-district/inter-basin transfers of NOx and VOCs:

AQ-SC18 The project owner shall demonstrate to the satisfaction of the CPM that adequate emission reduction credits have been purchased prior to start of construction of the project. The project emissions of 115 and 40 tons per year of NOx and VOC, respectively, shall be offset at a ratio of 1.3 to one for ERC’s within the MDAB or areas in the SJVAB ~~that are within 15 miles of the AVAQMD western boundary~~ (149.5 and 52 tons per year for NOx and VOC, respectively). ~~If ERCs are obtained from locations greater than 15 miles from the western portion of the AVAQMD, an offset ratio of 1.5 to one shall be utilized for those offsets.~~

⁷ See Exhibit 110, Applicant’s Response to Staff Status Report No. 8, Attachment A (AVAQMD Letter, June 29, 2010, p. 1).

⁸ See Exhibit 110, Applicant’s Response to Staff Status Report No. 8, Attachment E (AVAQMD Letter dated September 9, 2010.)

B. No EPA-Approved Rule Is Required For Road-Paving PM10 Offsets

The FSA discusses the purported need for an EPA-approved Attainment Demonstration and Maintenance Plan and a State Implementation Plan (SIP)-approved rule to provide for the creation of road paving PM10 offsets within the AVAQMD.⁹ Applicant believes this discussion is incorrect and likely stems from an inadvertent error in the first version of the Preliminary Determination of Compliance (PDOC) that incorrectly listed the project area as non-attainment for the federal PM10 standard.¹⁰ The PHPP is not located in a federal PM10 non-attainment area (i.e., the project area is in attainment for federal PM10 air quality standards). Once the error in the PDOC was corrected, the EPA made clear that it did not require a PM10 rulemaking for the PHPP:

With respect to PM10 ERCs, we acknowledge that the proposed reductions are to meet the State offset requirements. PHPP is located in an area of the District that is designated attainment for all federal National Ambient Air Quality Standards. We understand that there is no federally required District maintenance plan or other requirement that relies on offsets. Therefore, EPA Region 9 has determined that we will defer to the District and the State to review individual offsets in attainment areas that are required under Antelope Valley AQMD Rule 1305.¹¹

The AVAQMD has determined its existing rules provide for the issuance of PM10 ERCs generated from road-paving activities:

Rule 1305(8)(3) explicitly addresses the use of area and indirect source actual emission reductions as offsets. No additional rulemaking is necessary to allow the use of actual emission reductions from paving of an existing unpaved road as offsets.¹²

District Counsel for the AVAQMD has reiterated this position by letter dated September 9, 2010, concluding that “the AVAQMD does not plan to adopt a specific rule regarding the creation of PM10 offsets from road paving at this time but rather to use the existing applicable provisions of Regulation XIII to quantify, verify and allow use of such ERCs.”¹³

For the reasons stated above, Applicant believes that AC-SC19 should be revised as follows to reflect that an AVAQMD rule is not required to generate road paving offsets. In addition, in accordance with the FDOC (Exhibit 109), the PM10 offsets required for the Project are 128 tons per year at a 1 to 1 ratio, not 137 tons (*see also* response to Data Request 114 (Exhibit 56), p. AQ-25, submitted May 1, 2009).

⁹ FSA, p. 4.1-33.

¹⁰ Applicant has previously commented on why rulemaking is not required for road paving offsets, most recently in response to Staff’s Status Report No. 8 (Exhibit 110).

¹¹ *See* Exhibit 110, Applicant’s Response to Staff Status Report No. 8, Attachment F (Letter From EPA to Eldon Heaston, AVAQMD, p. 3, July 27, 2009).

¹² *See* Exhibit 110, Applicant’s Response to Staff Status Report No. 8, Attachment C (AVAQMD comments on Staff’s Status Report No. 4, dated July 6, 2010).

¹³ *See* Exhibit 110, Applicant’s Response to Staff Status Report No. 8, Attachment E.

AQ-SC19 ~~Once the District has adopted one or more rules to bank PM offsets from road paving, the~~ The project owner shall pave, with asphalt concrete that meets the current county road standards, unpaved local roads to provide emission reductions of ~~137~~ 128 tons per year of PM10, prior to start construction of the project. Calculations of PM10 emission reduction credits shall be performed in accordance with Sections 13.2.1 and 13.2.2 of the U.S. EPA's AP-42 "Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources", Fifth Edition.

The Applicant also requests that the Verification requirement be revised to reflect a more reasonable time period for submitting road paving plans to the CPM. The FSA's "one year prior to the start of construction" timing will significantly impact project cost and schedule without a commensurate environmental benefit. The 60-day period is also consistent with the Victorville 2 project.

Verification: At least ~~one-year~~ 60 days prior to start of construction, the project owner shall submit to the CPM plans and other documents to demonstrate compliance with this condition. ~~Construction~~ Paving shall not begin until the CPM has approved ~~all ERCS the road paving plan~~. This approval shall be done in consultation with the District. Documents shall include a list and pictures of candidate roads to be paved, their actual daily average traffic count including classifications of vehicles (ADT), and daily vehicle miles travel (DVMT), their actual road dust silt content, and calculations showing the appropriate amount of emissions reductions due to paving of each road segment. All paving of roads shall be complete at least 15 days prior to start construction of the project.

C. Proposed Revisions to Other Air Quality Conditions of Certification

1. AQ-SC11

The Applicant is requesting either that Condition AQ-SC11 be deleted, or if not deleted, that additional changes be made to the condition to more clearly tie the requirement to an air quality impact. A leak detection program of this complexity is not warranted for a relatively small solar field of 50 MW. In most jurisdictions and as defined in most regulations and guidance documents related to leak detection of fugitive components, HTF is a heavy liquid and as such is specifically excluded from a leak detection program, with limited exceptions (e.g., pump seals). Also, the Best Available Control Technology threshold in the AVAQMD is 25 pounds per day. The fugitive emissions from PHPP are predicted to be far less than that at only 1.1 pounds per day (0.2 tons per year).

The Applicant recognizes that the CEC has some uncertainty in the level of fugitive emissions from solar thermal projects, and thus has required leak detection for other much larger projects (250 MW or more) utilizing similar technology. Given the expected low level of emissions

for PHPP, the Staff has only proposed leak monitoring if losses of HTF are greater than 0.2 tons per year as the threshold that would trigger the requirement to implement AQ-SC11. It appears that this threshold was established based on the Applicant's estimate of air emissions. However, it is important to remember that HTF may escape the piping network in several ways that do not contribute to air emissions, for example liquid leaks from fitting malfunctions (seal ruptures, broken piping, etc.) or normal maintenance activities such as pump maintenance. At ambient conditions, the vapor pressure of HTF is very low, and air emissions would not occur. For this reason, if the Applicant's recommendation to delete the condition is not accepted, the condition should be modified as shown below.

AQ-SC11 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 period.

B. The project owner shall maintain record of the amount of HTF replaced on a monthly basis for a period of five years. The Applicant may subtract quantifiable liquid losses from the 'replaced' total to determine the amount lost to atmosphere. Any HTF losses that cannot be quantified as liquid losses are presumed lost to atmosphere. Should HTF loss to the atmosphere exceed the Applicant's estimate of 0.2 tons per year, the project owner shall implement the following leak detection and repair measures:

...

2. **AQ-SC14 and AQ-SC15**

The Applicant requests that AQ-SC14 and AQ-SC15 be deleted in their entirety, as they are either redundant or contradictory, and cannot be implemented as written. Both AQ-SC14 and AQ-SC15 require leak detection monitoring for the HTF expansion tank appurtenances; however, as written, they lack the necessary specificity to actually implement the requirement. These conditions would require a monitoring schedule (e.g., quarterly monitoring) to implement, otherwise, the requirement would apply continuously. Continuous monitoring is impractical for every flange and fitting on every tank. If HTF losses exceed 0.2 tons per year; AQ-SC11 would require leak monitoring for the tank appurtenances, making AQ-SC14 and AQ-SC15 redundant and unnecessary. If the leak rate does not exceed 0.2 tons per year, AQ-SC14 and AQ-SC15 would require monitoring and AQ-SC11 would not, making AQ-SC14 and AQ-SC15 contradictory. [Note that the Applicant has requested changes to AQ-SC11 also to clarify the requirements.] Therefore, the Applicant recommends deleting these conditions, as follows:

~~AQ-SC14 Expansion tank roof appurtenances shall not exhibit emissions exceeding 10,000 ppmv as methane measured with an instrument calibrated with methane and conducted in accordance with U.S. Method 21.~~

~~**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.~~

~~AQ-SC15 Each expansion tank shall be maintained leak free. A "leak" is defined as the dripping of liquid volatile organic compounds at a rate of three or more drops per minute, or vapor volatile organic compounds in excess of 10,000 ppm as equivalent methane as determined by EPA Test Method 21.~~

~~**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.~~

3. AQT-2

The Verification portion of Condition AQT-2 requires that the Project owner conduct monthly laboratory analysis of fuel sulfur content. As fuel sulfur content is routinely determined by the fuel supplier, this imposes an operational burden and expense on the Project owner that is unnecessary. Consequently, the Applicant requests the verification portion of this condition be modified as shown below:

AQT-2 This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.2 grains per 100 dscf on a rolling twelve month average basis, and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles. Compliance with this limit shall be demonstrated by providing evidence of a contract, tariff sheet or other approved documentation that shows that the fuel meets the definition of pipeline quality gas.

Verification: The project owner shall complete [or obtain from the fuel supplier](#), on a monthly basis, a laboratory analysis showing the sulfur content of natural gas being burned at the facility. The sulfur analysis reports shall be incorporated into the quarterly compliance reports.

4. AQT-5

The wording of AQT-5 is not entirely consistent with the wording of Condition 5 of the AVAQMD FDOC. To avoid confusion, the Applicant requests that the CEC adopt the wording of the FDOC, as shown below:

AQT-5 Emissions of CO and NO_x from this equipment shall only exceed the limits contained in Condition AQT-4 during startup and shutdown periods as follows:

a. Startup is defined as the period beginning with ignition and lasting until the equipment has reached operating permit limits, i.e., the applicable emission limits listed in Condition AQT-4. Cold startup is defined as a startup when the CTG has not been in operation during the preceding continuous 48 hours, although a startup after an aborted partial cold start is still considered a cold start ([a cold start that does not reach 85% output](#)). Other startup is defined as a startup that is not a cold startup. Shutdown is defined as the period beginning with the lowering of equipment from base load and lasting until fuel flow is completely off and combustion has ceased.

...

5. AQT-7

The verification of “compliance tests and hours of operation” proposed for AQT-7 sections (e) and (f), while appropriate for the stationary sources subject to the condition, is not appropriate for the fugitive emissions from HTF leaks or dust for vehicles use in the solar field. Fugitive emissions should be calculated using an appropriate methodology. To clarify the compliance requirement, the Applicant proposes the changes to the verification shown below:

AQT-7 Emissions from this facility, including the duct burner, auxiliary equipment, engines, cooling tower and fugitive dust for vehicle use in the solar field, shall not exceed the following emission limits, based on a rolling 12 month summary:

...

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by AQT-17. [Note, the requirement for compliance tests applies only to the stationary sources and fugitive emissions will be verified according to a District-approved calculation protocol.](#)

6. AQT-12

The wording of Condition AQT-12 is not entirely consistent with the wording of Condition 12 of the AVAQMD FDOC. In addition, there appears to be a typographical error in the Verification referencing MDAQMD. To avoid confusion, the Applicant requests that the CEC adopt the wording of the FDOC, as shown below:

AQT-12 Emissions of NO_x, CO, oxygen and ammonia slip shall be monitored using a Continuous Emissions Monitoring

System (CEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. Stack gas flow rate shall be monitored using either a Continuous Emission Rate Monitoring System (CERMS) meeting the requirements of 40 CFR 75 Appendix A or a stack flow rate calculation method. The o/o shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan, ~~and~~ AVAQMD Rule 218, 40 CFR 60 and/or 40 CFR 75 as applicable. ~~and they shall be installed prior to initial equipment startup after initial steam blows are completed. Two (2) months prior to installation the operator shall submit a monitoring plan for District review and approval. The o/o shall notify the APCO and the USEPA of the date of first fire and the date of initial commercial operation of each affected unit.~~

Verification: The o/o shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan and ~~MDAQMD~~ AVAQMD Rule 218, and they shall be installed prior to initial equipment startup after initial steam blows are completed. Two (2) months prior to installation the operator shall submit a monitoring plan for District review and approval.

7. AQT-13

The Verification section of AQT-13 is inconsistent with the condition itself with respect to submittal timelines. To avoid confusion, the Applicant requests changes shown below:

AQT-13 The o/o shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing.

Verification: The project owner shall notify the District and the CPM within ten (10) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within ~~60~~ 45 days of the date of the tests.

8. AQT-15

The Verification section of AQT-15 is inconsistent with typical AVAQMD notification timelines. To avoid confusion, the Applicant requests the changes shown below:

AQT-15 The o/o shall, at least as often as once every five years (commencing with the initial compliance test), include the following supplemental source tests in the annual compliance testing:

...

Verification: The project owner shall notify the District and the CPM within ~~seven (7)~~ ten (10) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

9. AQT-16

The requirement in AQT-16(a) is inconsistent with Condition 16 of the FDOC. In addition, the Verification for this condition is inappropriate for the condition. To avoid confusion and to facilitate verification, the Applicant recommends the changes shown below:

AQT-16 Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B (or otherwise District approved):

- a. For NO_x, ~~Performance Specification 2.40~~ CFR 75.

...

Verification: ~~At least 60 days prior to construction of the turbine stacks, the project owner shall provide the District and CPM, for approval, a detailed drawing and a plan on how the measurements and recordings, required by this condition, will be performed by the chosen monitoring system. The o/o shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan and AVAQMD Rule 218, and they shall be installed prior to initial equipment startup after initial steam blows are completed. Sixty (60) days prior to installation, the operator shall submit a monitoring plan for District review and approval.~~

10. AQT-25

The Verification section imposes requirements for compliance source testing that are not required by the condition itself related to testing during start-up and shutdown. The condition clearly references only those limits in condition 4 (or AQT-4 in the FSA numbering) that relate to normal hourly emission limits. In addition, AQT-25 is inconsistent with typical AVAQMD notification timelines. Therefore, the Applicant is requesting that the additional start-up and shutdown testing specified in the Verification for AQT-25 be deleted, as shown below:

AQT-25 Within 60 days after achieving the maximum firing rate at which the facility will be operated, but not later than 180 days after initial startup, the operator shall perform an initial compliance test. This test shall demonstrate that this equipment is capable of operation at 100% load in compliance with the emission limits in Condition AQT-4.

Verification: No later than 30 working days before the commencement of the source tests, the project owner shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. ~~In addition, the source tests shall include a minimum of three start-up and three shutdown periods and shall include at least one cold start, and one hot or warm start.~~ The project owner shall incorporate the District and CPM comments into the test plan. The project owner shall notify the District and the CPM at least ~~seven (7)~~ ten (10) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

11. AQAB-8

For the Auxiliary boiler, the FSA is missing Condition 8 from the FDOC. To ensure consistency, the Applicant recommends that Condition AQAB-8 be added to the FSA, as follows:

AQAB-8 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed operating time.

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.

12. AQHH-6

The Verification section of AQHH-6 is inconsistent with typical AVAQMD notification timelines. To avoid confusion, the Applicant requests changes shown below:

AQHH-6 The o/o shall perform the following annual compliance tests on this equipment in accordance with the AVAQMD Compliance Test Procedural Manual. The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit. The following compliance tests are required:

...

Verification: The project owner shall notify the District and the CPM within ~~seven (7)~~ ten (10) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

13. ABHH-7

For the HTF heater, the FSA is missing Condition 7 from the FDOC. To ensure consistency and avoid confusion, the Applicant recommends that Condition ABHH-7 be added to the FSA, as follows:

AQHH-7 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed operating time.

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.

14. AQEG-3

Condition AQEG-3 is not consistent with emergency generator Condition 3 of the AVAQMD FDOC in that it lacks the 200 hour annual operating limit. To avoid confusion, the Applicant requests the changes shown below:

AQEG-3 This unit shall be limited to use for emergency power, defined as when commercially available power has been interrupted. In addition, this unit may be operated as part of a testing program that does not exceed 50 hours of testing or maintenance per calendar year. Furthermore, pursuant to District Rule 1110.2, this unit shall be operated less than 200 hours per

calendar year. This requirement includes usage during emergencies.

15. AQFS-3

Condition AQFS-3 is not consistent with fire water pump engine Condition 3 of the AVAQMD FDOC in that it lacks the 200 hour annual operating limit. To avoid confusion, the Applicant requests the changes shown below:

AQFS-3 This unit shall be limited to use for emergency fire fighting. In addition, this unit may be operated as part of a testing program that does not exceed 50 hours of testing or maintenance per calendar year. Furthermore, pursuant to District Rule 1110.2, this unit shall be operated less than 200 hours per calendar year. This requirement includes usage during emergencies.

III. ALTERNATIVES

The FSA acknowledges that “the applicant’s proposed transmission line route has no unmitigable significant impacts.”¹⁴ The FSA includes a substantially expanded alternatives analysis based on a March 8, 2010 comment letter received from the County of Los Angeles. Alternatives Appendix A identifies two new alternate transmission line routes (Alternative Route 4 and Alternative Route 5).

Staff concludes that both routes are feasible from a cost and engineering standpoint. Staff also concludes that although the Applicant’s proposed route does not result in any significant impacts, Staff’s Alternative Routes 4 and 5 “would reduce impacts to air quality, biological resources, hazardous materials, public health, soil and water resources, transmission line safety and nuisance and worker safety.”¹⁵

Although the Applicant continues to believe that the expanded alternative analysis was not required by CEQA,¹⁶ the Applicant concurs with Staff’s conclusions that neither the proposed transmission line route nor Alternative Routes 4 or 5 will result in a significant environmental impact. However, with respect to some of the specifics of the Staff’s analysis of Alternative Routes 4 and 5, Applicant provides the following comments.

¹⁴ FSA, Alternatives Appendix A, p. A-1; *see also* FSA, p 6-1.

¹⁵ FSA, Alternatives Appendix A, p. A-1.

¹⁶ Applicant identified in its responses to Status Report No. 8 (Exhibit 110) that, although CEQA requires Staff to respond to public comments, the Los Angeles County comment letter did not warrant a substantially expanded alternatives analysis (e.g., the approximately 230-page supplemental alternatives analysis in FSA Appendix A).. The Los Angeles County comment letter does not provide any new information or analysis that would materially change the analysis provided by the AFC or the PSA; thus, Applicant continues to believe that an expanded new analysis was not warranted to address the County of Los Angeles comment letter. (*See* Title 14, California Code of Regulations, § 15204(a); *see City of Long Beach v. Los Angeles Unified Sch. Dist.*, 176 Cal. App. 4th 889, 901 (2009) [“The level of detail required in a response to a comment depends on...the extent to which the matter is already addressed in the DEIR”].)

A. Comments on Staff’s Feasibility and Cost Determination for Alternative Route 4

Based on the Applicant’s review of the Alternatives Appendix A, it is not clear whether the potential benefits associated the underground portions of Alternative Route 4 are sufficient to offset the potential costs, construction impacts, and reliability concerns associated with the development of such underground facilities.

1. Costs

In its analysis, Staff assumed that the per-unit cost of an overhead PHPP gen-tie line would be \$2 million per mile while that for an underground gen-tie line would be \$7 million per mile. Staff concludes that overall, Alternative Route 4 would be less costly than the Applicant’s proposed route. However, Staff also notes that the costs of underground facilities can vary significantly depending upon the conditions and terrain in which the line is to be built. The report entitled “Out of Sight, Out of Mind Revisited” which was prepared for the Edison Electric Institute (EEI) in December 2009¹⁷ contains the following information regarding the costs for new overhead (OH) and underground (UG) transmission lines in rural and suburban environments.¹⁸

	Overhead Lines (\$Million/Mile)		Underground Lines (\$Million/Mile)		Ratio UG vs OH	
	Suburban	Rural	Suburban	Rural	Suburban	Rural
Minimum Value	0.20	0.15	1.10	1.10	5.5	7.3
Average Value	1.61	1.22	7.53	6.35	4.7	5.2
Maximum Value	3.50	2.28	16.5	10.00	4.7	4.4

The following conclusions can be drawn from a review of the information in Table 1:

- There can be a significant difference between the costs of building new transmission lines depending on the environment in which they are located and whether they are overhead or underground.
- The “minimum” costs are likely for low voltage facilities and are not pertinent to this evaluation for the PHPP.
- The “average” costs for overhead lines are of the same order of magnitude as the assumed costs for an overhead PHPP gen-tie line. As a result the cost ratios associated with the average costs are most pertinent for the following discussion for

¹⁷ Kenneth L. Hall, P.E., Hall Energy Consulting, Inc., Prepared for Edison Electric Institute, Out of Sight, Out of Mind Revisited: An Updated Study on the Undergrounding Of Overhead Power Lines, December 2009, available at: <http://www.eei.org/ourissues/electricitydistribution/Documents/UndergroundReport.pdf> (“Out of Sight, Out of Mind Revisited”). This document is incorporated by reference in its entirety to these FSA comments.

¹⁸ Customer density in a rural environment is 50 or fewer customers per square mile while that in a suburban environment ranges from 51 to 149 customers per square mile.

¹⁹ Out of Sight, Out of Mind Revisited, supra, Figure 6.1.

the PHPP.

- As shown in Table 1 the “UG to OH” ratio based on average costs ranges from 4.7 for a suburban environment to 5.2 for a rural environment.

TABLE 2 COMPARISON OF ALTERNATIVES				
	Applicant’s Proposed Route	Alternative Route 4		
		Per CEC FSA	Per EEI* Suburban	Per EEI Rural
Assumed Lengths (Miles)				
Overhead Line	36.5	6.05	6.05	6.05
Underground Line	0	6.75	6.75	6.75
Total	36.5	12.80	12.80	12.80
Estimated Costs (\$Millions)				
Overhead Line	89.2	12.1	12.1	12.1
Underground Line	0.0	47.3	63.5	70.2
Total	89.2	59.4	75.6	82.3

* Edison Electric Institute, Out of Sight, Out of Mind Revisited: An Updated Study on the Undergrounding Of Overhead Power Lines, December 2009.

Table 2 is based on the “Alternatives Appendix A Table 1” included in the FSA.²⁰ The information summarized in Table 2 shows that the estimated costs associated with the PHPP gen-tie line could vary significantly depending on the costs assumed for underground construction contemplated by Alternative Route 4. The information in Table 2 demonstrates that the relative costs of the proposed route and Alternative Route 4 are comparable depending on the underlying assumptions, particular when considering information in Edison Electric Institute, Out of Sight, Out of Mind Revisited: An Updated Study on the Undergrounding Of Overhead Power Lines, December 2009. Thus, it is not at all clear that Alternative Route 4 would result in the cost savings predicted by Staff.

2. Construction and Maintenance

The FSA suggests that most of the proposed UG section of Alternative Route 4 would be installed in City streets and would share the route of the proposed PHPP gas line and water supply line and notes that the trench for the UG line would be 7-10 feet wide and 6 feet deep. Concerns with respect to FSA, Alternatives Appendix A, conclusions regarding Alternative Route 4 include:

- The impacts on traffic when the pertinent streets were unavailable during construction and if a fault were to occur on the line requiring that all or sections of it be replaced.

²⁰ Table 2 includes information on assumed lengths and costs associated with: The “Applicant’s Proposed Route” as discussed in the FSA; Alternative Route 4 (as also discussed in the FSA) if: The costs for underground lines is \$7 million per mile as assumed in the FSA; The costs for underground lines is \$9.4 million per mile per the EEI information for a suburban environment; The costs for underground lines are \$10.4 million per mile per the EEI information for a rural environment.

- The impacts which a failure of either the gas or water line could have on the transmission line and the efforts required to mitigate such impacts.
- The potential for damage to the transmission line should it be struck by equipment performing maintenance or repair on other underground facilities in the proximity of the line. Such facilities could include the PHPP water and gas lines mentioned above or other facilities (such as water mains, sewer lines, and other gas lines as noted in the FSA).

Accordingly, it is unclear whether Alternative Route 4 is as feasible as the Applicant’s proposed route in terms of construction and maintenance.

3. Reliability and Availability

Alternatives Appendix A Table 5 in the FSA compares “typical” reliability statistics for overhead and underground lines. This information is presented in Table 3.

TABLE 3 TYPICAL RELIABILITY STATISTICS			
	Overhead Lines	Underground Lines	Ratio
Forced Outage Rate (Outages/Year/Mile)	0.005	0.00165	3.3
Mean Time Between Failure (Years)	200	606	3.0
Mean Time to Repair (Days)	0.375	21	56
Unavailability (Hours/Year)	0.045	0.832	18.5

The following conclusions can be based on a review of the information in Table 3:

- The “mean time to repair” for an underground line could be over 50 times as long as would be the case with an overhead line.
- The “unavailability” of an underground line could be 18 times higher than that for an overhead line.

Accordingly, Table 3 demonstrates that Alternative Route 4 may have lower reliability and availability characteristics than the Applicant’s proposed route in certain respects.

B. Comments on Relative Environmental Impacts of Alternative Routes 4 and 5 Compared to the Proposed Transmission Line Route

Staff concludes that although the Applicant’s proposed route does not result in any significant impacts, Alternative Routes 4 and 5 “would reduce impacts to air quality, biological resources, hazardous materials, public health, soil and water resources, transmission line safety and nuisance and worker safety.”²¹ A closer review of Appendix A demonstrates that Alternative Routes 4 and 5 may not reduce impacts for some of these topic areas and may in fact increase impacts for land use, socioeconomics and traffic. Applicable offers the following comments by topic area:

²¹ FSA, Alternatives Appendix A, p. A-1.

- **Cultural Resources** – Although neither the proposed route nor Alternative Routes 4 or 5 will have a significant impact on Cultural Resources, Alternative Routes 4 and 5 will have the potential to affect a much higher number of known historic-period archaeological resources.²² Accordingly, Alternative Routes 4 and 5 may have greater impact on Cultural Resources than the proposed route.
- **Land Use** – Although neither the proposed route nor Alternative Routes 4 or 5 will have a significant impact on Land Use, Alternative Routes 4 and 5 will result in potential inconsistencies with land use zoning and policies.²³ The proposed route will be consistent with all applicable LORS. Alternative Routes 4 or 5 also require the addition of another Condition of Certification, LAND-4. Accordingly, Alternative Routes 4 and 5 may have greater Land Use impact than the proposed route.
- **Public Health** – Although neither the proposed route nor Alternative Routes 4 or 5 will have a significant impact on Public Health, Staff concludes that construction of the proposed route would lead to higher public exposure of construction emissions than Alternative Routes 4 or 5 because of the longer route.²⁴ However, Staff does not consider that the proposed route is substantially more isolated than Alternative Routes 4 and 5 (i.e., located on undeveloped lands or areas with low population densities), likely resulting in a lower total public exposure. Accordingly, it is unclear whether Alternative Routes 4 and 5 will have a higher or lower impact on Public Health than the proposed route.
- **Socioeconomics** – Although neither the proposed route nor Alternative Routes 4 or 5 will have a significant impact on Socioeconomics, Alternative Routes 4 or 5 will be more disruptive to local businesses and residents because of potential road closures to major traffic arterials and disruptions to local streets. Accordingly, Alternative Routes 4 and 5 may have greater Socioeconomic impact than the proposed route.
- **Traffic & Transportation** – Although neither the proposed route nor Alternative Routes 4 or 5 will have a significant impact on Traffic & Transportation, Staff acknowledges, “Alternative Route 5 would have a greater potential for requiring road closures because of the higher number of overhead transmission line crossings at public roadways (18 at-grade crossings) versus approximately six (6) at-grade overhead crossings with implementation of Alternative Route 4. Furthermore, eight (8) of the crossings for Alternative Route 5 are major arterials.”²⁵ Accordingly, traffic impacts and road closures associated with Alternative Routes 4 and 5 may have a greater adverse effect on local economies and traffic than the proposed route because the proposed route is more isolated from densely populated areas.

²² FSA, Alternatives Appendix A, p. A-129, Table 3.3-3.

²³ FSA, Alternatives Appendix A, p. A-162.

²⁴ See FSA, Alternatives Appendix A, p. A-168.

²⁵ FSA, Alternatives Appendix A, p. A-168.

IV. BIOLOGY

The Applicant provides the following comments and proposed revisions for the Biology Conditions of Certification (COC). Note, in some instances the entire COC is not provided because of its length; such text is left out only to keep down the length of the FSA comments. All proposed deletions are made in ~~red-strikethrough~~ text and proposed insertions are made in green underlined text.

A. Topsoil Salvage Requirements

In the Applicant's comments on the PSA (Exhibit 106) regarding proposed Conditions of Certification BIO-8 and BIO-10, Applicant requested that the requirements for topsoil salvage be reduced to the top 3 – 4 inches, consistent with the guidance cited by Staff (Newton and Claassen, 2003) and based on size restrictions of this site. Biologically, the shallower collection is appropriate because the seed bank is largely contained within the top 2 inches of the soil (Leck et al. 1989, Pake and Venable 1996). While we appreciate that Staff did consider our request and made some other changes, this request regarding the amount of topsoil was not accepted. In the FSA Response to Public and Agency Comments (p. 4.2-84), Staff rejects the Applicant's request based on the requirement for 6 – 8 inches being consistent with other recent solar projects, specifically the Calico (08-AFC-13) and Rice (09-AFC-10) solar projects. However, no justification was provided why this amount of topsoil is needed for PHPP. We note that in general the solar projects that were in the expedited permitting track and/or hoping to qualify for American Recovery and Reinvestment Act (ARRA) funding were not prone to question some requirements so as to not delay their approvals. Therefore, we do not find consistency with recent solar projects that go beyond what is common practice and/or what is recommended in cited guidance documents for the size of stockpiles to be a compelling reason to include overly onerous requirements.

We request that the Applicant's comments on the PSA regarding BIO-8 and BIO-10 be reconsidered as shown below:

BIO-8:

16. Stockpile Topsoil. To increase chances for revegetation success, topsoil shall be stockpiled from the project site ~~and along project linear features~~ for use in revegetation. The top two (2) to three (3)~~six (6) to eight (8)~~ inches of native topsoil from the least disturbed locations and only areas that are relatively free of noxious weeds shall be used as a source of topsoil. ~~All other e~~ Elements related to the collection and stockpiling of topsoil for use shall be as described in *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003, pp. 39-40).

BIO-10:

2. Topsoil Salvage. Topsoil shall be stockpiled from the project site for use in revegetation of temporarily ~~the~~-disturbed soils. Two (2) to three (3)~~Six (6) to eight (8)~~ inches of soil below shall be scraped and separately stockpiled for use in revegetation

of temporarily disturbed areas. ~~All other e-~~Elements related to the collection and stockpiling of topsoil shall be conducted as described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003).

Literature Cited:

- Leck, M.A., V.T. Parker and R. L. Simpson. 1989. Ecology of soil seed banks. Academic Press, Inc. San Diego, CA. 444 pp.
- Newton, G. A. and V. P. Claasson, 2003. Rehabilitation of Disturbed Lands in California: A Manual for Decision-Making. California Department of Conservation, California Geological Survey. 228 p.
- Pake, C.E. and D. L. Venable. 1996. Seed banks in desert annuals: implications for persistence and coexistence in variable environments. *Ecology* 77(5):1427-1435.

B. Desert Tortoise Requirements

In the Applicant's comments on the PSA (Exhibit 106) regarding proposed Condition of Certification BIO-13, Applicant requested that the requirements related to handling of desert tortoise be deleted as the Applicant was not seeking take protection for this species from the CDFG, since its occurrence on the PHPP power plant site is considered highly unlikely based on the results of protocol surveys. However, in the FSA Response to Public and Agency Comments (p. 4.2-85), Staff recommends the language related to desert tortoise remain as proposed in the PSA, since these and other conditions would serve as the PHPP's Section 2018 Incidental Take Permit. Therefore, Applicant has reconsidered and agrees to accept most of Staff's recommended condition BIO-13 (as well as BIO-2, BIO-3, BIO-7 and BIO-8) except for requirements related to a translocation plan. Because Applicant considers the occurrence of desert tortoise to be extremely low on the plant site, and USFWS, CDFG and Staff agree with this opinion, we request that the preparation of a translocation plan only be required if a desert tortoise or recent sign is found on the plant site during the first clearance survey for desert tortoise.

Tortoises are highly unlikely on the plant site. Focused surveys conducted in 2006 on the power plant site and in 2008 on the entire project and buffer (zone of influence [ZOI]) found no tortoises or tortoise sign. While a potential burrow was found during 2008 surveys on the 3,960-foot ZOI transect west of the power plant site, it was sufficiently questionable that the associated species was undetermined. Focused surveys conducted in 2008 on adjacent Air Force Plant 42 also did not detect desert tortoise or sign (Hagen 2008). The highly fragmented nature of the project vicinity - highways, railroad tracks, intense urbanization and agriculture) make it highly unlikely that desert tortoises are present in and could wander onto the plant site from adjacent lands. Known occupied habitat is 16 miles northeast of the plant site.

Furthermore, desert tortoise are presumed to be absent on the reclaimed water pipeline, potable water pipeline, natural gas supply pipeline, and sanitary wastewater pipeline, based on the survey results from two years of focused surveys, plus other data from historic and recent surveys and assessments. Although no tortoise sign was observed during transmission line surveys, there is a low chance that desert tortoises are present along the north-south portion of transmission line segment 1 and the southeast portion of transmission line segment 2, because of the presence of

suitable habitat in the corridor and relatively uninterrupted habitat connected to documented tortoise habitat 9-12 miles northeast. However, it is unknown if tortoises occupy the intervening habitat.

Because of the extremely low likelihood of tortoises on the plant site, and low likelihood on the linear facilities, a desert tortoise translocation plan is unwarranted. Instead, if tortoise sign or a tortoise is observed on the plant site during the first clearance, a translocation plan will be prepared and submitted for approval to the USFWS, CDFG and CPM, an approach that is identical to that for burrowing owls and Mohave ground squirrels. Approvals will be required prior to moving any tortoise to an approved translocation site. The translocation plan will discuss the translocation location or disposition of the tortoise(s), health analyses, and studies of the recipient population and translocated tortoises, if any. Measures will be relevant to the fully segregated, isolated nature of the tortoise habitat on and in the vicinity of the plant site and directed toward species recovery.

A few other changes that were made in Applicant's PSA comments (Exhibit 106), which we believe add to the clarity and continued consistency with requirements, are also included below.

BIO-13 The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid impacts to desert tortoise. Methods for clearance surveys, fence installation, and other procedures shall be consistent with those described in the *Guidelines for Handling Desert Tortoise During Construction Projects* (Desert Tortoise Council 1999) or more current guidance provided by CDFG and USFWS. These measures include, but are not limited to, the following:

1. Fence Installation. Prior to ground disturbance, the entire plant site shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFG. Biological Monitors may assist the Designated Biologist under his or her supervision.

These surveys shall provide 100% coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 feet apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol.

- a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.
 - b. Fence Material and Installation. The permanent tortoise exclusionary fencing shall be constructed in compliance with current USFWS guidelines. ~~consist of galvanized hard wire cloth 1 by 2 inch mesh sunk 12 inches into the ground, and 24 inches above ground (USFWS 2008b, Appendix D).~~
 - c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises, including gates that would exclude public access to the PHPP site.
 - d. Tower Fencing. If tortoises are discovered during clearance surveys of the linear routes, the tower locations shall be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction. Temporary fencing must follow current USFWS guidelines for permanent fencing and supporting stakes shall be sufficiently spaced to maintain fence integrity.
 - e. Fence Inspections. Following installation of the desert tortoise exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected weekly and, where drainages intersect the fencing, during and immediately following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the utility corridor or tower site for tortoise.
2. Desert Tortoise Clearance Surveys. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of tortoises by the Designated Biologist, who may be assisted by Biological Monitors. A minimum of two clearance surveys, with negative results, must be completed, and these must coincide with heightened desert tortoise activity from late March through May and during October. To

facilitate seeing the ground from different angles, the second clearance survey shall be walked at 90 degrees to the orientation of the first clearance survey.

3. Relocation for Desert Tortoise. If desert tortoises are detected on the PHPP plant site during clearance or other activities, the owner shall coordinate with the USFWS, CDFG, and CPM regarding the disposition of the animals. If located during clearance surveys within the transmission line project-route, the tortoise would be allowed to continue unimpeded, out of harm's way. Only in the event that a tortoise needed relocation to keep it safe would ~~impact area~~ the Designated Biologist ~~shall~~ move the tortoise the shortest possible distance, keeping it out of harm's way but still within its home range; the USFWS, CDFG, and CPM would be contacted following this action. Desert tortoise encountered during construction of any of the utility corridors shall be similarly treated in accordance with the techniques described in the *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website. Any person handling tortoise must be ~~trained and~~ approved by the USFWS and CDFG. ~~and be on site during ground disturbance or construction. A site where tortoises will be moved must be pre-approved, and acquired prior to ground disturbing activities. The health of any tortoise to be translocated must be assessed prior to moving; a quarantine site located for any ill tortoise must be designated. The host population of tortoise surveyed prior to any translocated tortoise being moved, and a study to determine the efficacy of the translocation and impact to host population be conducted for a minimum of 5 years.~~

If tortoise sign or a tortoise is observed on the plant site during the first clearance survey, a translocation plan will be prepared and submitted for approval to the USFWS, CDFG and CPM. Approvals will be required prior to translocating any tortoise.

4. Burrow Inspection. All potential desert tortoise burrows within the fenced area shall be searched for presence. In some cases, a fiber optic scope may be needed to determine presence or absence within a deep burrow. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined. ~~Tortoises excavated from burrows shall be translocated to unoccupied natural or artificial burrows immediately following excavation in an area approved by the Designated Biologist if environmental conditions warrant immediate relocation.~~

5. Burrow Excavation. Burrows inhabited by tortoises shall be excavated by the Designated Biologist or other approved handler, using hand tools, and then collapsed or blocked to prevent re-occupation. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist or other handlers approved by the USFWS, CDFG, and CPM (see Number 3, above) in accordance with the USFWS-approved protocol (Desert Tortoise Council 1999) or more current guidance on the USFWS website.

6. Monitoring During Clearing. Following construction of exclusion fencing and completion of clearance surveys ~~desert tortoise clearance removal from the plant site and translocation to a new site,~~ heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A Biological Monitor shall be onsite during initial clearing and grading activities. Should a tortoise be discovered, the measures outlined in Paragraph 3 shall be followed. ~~it shall be translocated as described above in accordance with the Desert Tortoise Translocation Plan.~~

7. Reporting. The Designated Biologist shall record the following information for any desert tortoises observed ~~or handled:~~

- a) the locations (narrative and maps) and dates of observation;
- b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders;
- c) location moved from and location moved to (using GPS technology);
- d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes);
- e) ambient temperature when handled and released; and
- f) digital photograph of each handled desert tortoise as described in the paragraph below.

Desert tortoise moved from within project areas shall be marked for future identification as described in *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website. Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification. Any desert tortoises observed within the project area or adjacent habitat shall be reported to the USFWS, CDFG, and CPM by written and electronic correspondence within 24 hours.

Verification: ~~No less than 60 days prior to start of any site mobilization or disturbance activities, the applicant shall submit to Energy Commission Staff, USFWS and CDFG a draft Desert~~

~~Tortoise Translocation Plan. At least 60 days prior to start of any project related ground disturbance activities, the project owner shall provide the CPM with the final version of a Translocation Plan that has been approved by Energy Commission staff in consultation with USFWS and CDFG. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Desert Tortoise Translocation Plan must be made only after approval by the Energy Commission staff in consultation with USFWS and CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM approved modifications to the Translocation Plan.~~

~~Within 30 days after initiation of translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Translocation Plan have been completed, and a summary of all modifications to measures made during implementation.~~

Within 30 days of completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to the CPM, USFWS, and CDFG describing how each of the mitigation measures described above has been satisfied. The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

C. Raven Fee, Monitoring, Management, And Control Plan

In the Applicant's comments on the PSA (Exhibit 106) regarding proposed Condition of Certification BIO-14, Applicant requested that the regional raven management plan funding requirements be deleted for reasons similar to the ones stated above for BIO-13. While Staff did not directly respond to this request in the FSA Response to Public and Agency Comments, BIO-14 was only modified to make the funding contribution more explicit as to the amount and specific fund. Applicant's position remains that no in-lieu fee for the REAT Regional Raven Management Program is reasonable for the PHPP plant site for several reasons:

1. In two years of surveys no tortoise sign was observed on the plant site or buffer. It is likely that few to no tortoises remain in the relict habitat in the broader plant site vicinity due to the types and extent of the area's development, which would result in intensive direct and indirect impacts to tortoises. Even if occupied, this remaining habitat is entirely isolated from occupied tortoise habitat by extensive development, so it is of no value to species persistence and recovery. If ravens were to occur on the plant site, they would not affect the species in a meaningful way, either because no tortoises are likely on the plant site and vicinity or because predation, even if it were to occur, would occur

in a segment of the population that cannot currently contribute to species persistence and ultimately will be extirpated by impacts unrelated to the PHPP.

2. There are many developments in the project vicinity that are far more attractive to ravens than the PHPP, especially in light of the project's raven control program, which would eliminate and/or minimize potential raven subsidies associated with the plant site. Increases in raven populations at the plant site due to project activities therefore are highly unlikely.
3. While occupied tortoise habitat has been documented approximately 16 miles from the plant site, and ravens have been documented to forage as far as means of 16.8 miles (Mahringer 1970 in Boarman and Heinrich 1999), typical foraging distances from a roost are much shorter, 3.9 mi (Kristan and Boarman 2003). Flight distances from roosts to food sources are highly variable and influenced by resource abundance and availability, population densities, breeding state and age, geographic location and elevation, local genotypes, and individuality. Most studies have focused on landfill associations, which are a much more attractive food resource than open desert, so flight distances to landfills from a roosting location may not be meaningful.

While the Applicant believes that a raven management fee should not be required for PHPP, there is a low likelihood that ravens could occur along portions of Segment 1 of the Applicant's proposed transmission line route. Therefore, Applicant is willing to pay a fee based on the acreage disturbed by construction of the transmission line. Compensation for the entire transmission line is generous, since not all of the transmission line represents tortoise habitat or is adjacent to tortoise habitat.

Note, FSA Alternatives Appendix A provides a set of Conditions of Certification that would apply in the case of other optional transmission line route(s) being selected by the Applicant. All comments provided in this document with respect to biological resources would apply to these conditions for Alternate Route 5 and the Partial Underground Alternate as well. In the case of BIO-14 under these two Alternatives, since the transmission line would not be routed to the east, no funding for raven management should be required.

Literature Cited:

- Boarman, W. I., and B. Heinrich. 1999. Common Raven (*Corvus corax*). In The Birds of North America, No. 476 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
- Hagen, M. 2008. Personal communication with AMEC Wildlife Biologist Matt Amalong.
- Kristan, W. B. III and W. I Boarman. 2003. Spatial pattern of risk of common raven predation on desert tortoises. *Ecology* 84(9):2432-2443.
- Mahringer, E. B.. 1970. The population dynamics of the Common Raven (*Corvus corax*) on the Baraga Plains L'Anse, Michigan. M.S. thesis., Michigan Tech. Univ., Houghton.

BIO-14 The project owner shall design and implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven

management guidelines and that meets the approval of the USFWS, CDFG, and the CPM. Any subsequent modifications to the approved Raven Plan shall be made only with approval of the CPM in consultation with USFWS and CDFG. The Raven Plan shall include but not be limited to a program to monitor increased raven presence in the Project vicinity and to implement raven control measures as needed based on that monitoring. The purpose of the plan is to avoid any Project-related increases in raven numbers during construction, operation, and decommissioning. The threshold for implementation of raven control measures shall be any increases in raven numbers from baseline conditions, as detected by monitoring to be proposed in the Raven Plan.

...

2. Contribute to the REAT Regional Raven Management Program. The project owner shall submit payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the REAT Regional Raven Management Program. The amount shall be a one-time payment of \$105 per acre (~~75.49~~ ~~458.5~~ acres) of permanent disturbance fee \$ ~~7,926.45~~ ~~48,142.50~~.

D. Swainson's Hawk Habitat Compensatory Mitigation

Applicant provided comments on the PSA (Exhibit 106) regarding proposed Condition of Certification BIO-17 on May 12, 2010. On May 13, 2010, guidance on mitigation for Swainson's hawk was released by CEC and CDFG. The FSA was revised to more closely conform to this guidance. However, the guidance simply states that compensation lands should be provided at a ratio of 2:1 for potential foraging habitat. In the FSA, Staff has included a requirement that the compensation lands be provided based on the types of native plant communities on the PHPP plant site. Applicant believes that specifying that the selected compensation land must have these exact proportions of plant communities, including 10.22 acres of agricultural lands, is unreasonable, infeasible and not supported by the guidance, and hence should not be required.

We appreciate that Staff has reconsidered the requirement for protocol surveys, and offers such surveys as an option should the Applicant choose to attempt to show absence of this species within five miles of PHPP components. However, our preliminary estimation is that these surveys over such a large distance and over multiple time periods would be extremely costly and may actually exceed the cost of providing the required compensation lands. Therefore, it is unlikely that the Applicant would choose this option under the current guidance.

BIO-17 The project owner shall either assume that Swainson's hawk nest within five miles of the project site and provide compensatory mitigation as described below or complete CDFG protocol surveys within five miles of project facilities that result in permanent impacts to Swainson's hawk foraging habitat.

If surveys are completed they shall include the following components.

...

Regardless of the estimates, the project owner is responsible for providing adequate funding to implement the required mitigation. These impact acreages shall be adjusted to reflect the final project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Palmdale Hybrid Power Plant Project Site and 10.22 acres of agricultural lands that occur on Segment 1.

This compensation acreage may be included (“nested”) within the acreage acquired and managed as Mohave ground squirrel habitat compensation (Condition of Certification BIO-20) only if:

A minimum of 610 acres ~~of~~ composed of suitable foraging habitat, such as including a minimum of 366.3 acres of Joshua tree woodland, ~~233.1 acres of~~ Mojave creosote bush scrub and ~~10 acres of~~ agricultural lands, are present.

The Mohave ground squirrel habitat compensation lands are acquired and dedicated as permanent conservation lands within 18 months of the start of project construction.

...

E. Burrowing Owl Impact Avoidance, Minimization, And Compensation Measures

If occupied burrowing owl burrows on the Project site cannot be avoided, passive relocation on the Project site should be implemented, if feasible.

BIO-18 The project owner shall implement the following measures to avoid and offset impacts to burrowing owls:

...

3. Passive Relocation of Burrowing Owls. If pre-construction surveys indicate the presence of burrowing owls within the Project Disturbance Area (the Project Disturbance Area means all lands disturbed in the construction and operation of the PHPP Project), the Project owner shall prepare and implement a Burrowing Owl Relocation and Mitigation Plan, in addition to the avoidance measures described above. The final Burrowing Owl

Relocation and Mitigation Plan shall be approved by the CPM, in consultation with USFWS and CDFG, and shall:

a. Identify and describe suitable relocation sites on the Project site or within 1 mile of the Project Disturbance Area, and describe measures to ensure that burrow installation or improvements would not affect sensitive species habitat or existing burrowing owl colonies in the relocation area;

...

4. Acquire Compensatory Mitigation Lands for Burrowing Owls. The following measures for compensatory mitigation shall apply only if burrowing owls are detected within the Project Disturbance Area. The Project owner shall acquire, in fee or in easement, 19.5 acres of land for each burrowing owl that is displaced by construction of the Project. This compensation acreage of 19.5 acres per single bird or pair of nesting owls assumes that there is no evidence that the compensation lands are occupied by burrowing owls. If burrowing owls are observed to occupy the compensation lands, then only 9.75 acres per single bird or pair is required, per CDFG (1995) guidelines. If the compensation lands are contiguous to currently occupied habitat, then the replacement ratio will be 13.0 acres per pair or single bird. The Project owner shall provide funding for the enhancement and long-term management of these compensation lands. The acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described in Section 3.i. of Condition of Certification BIO-20.

a. Criteria for Burrowing Owl Mitigation Lands. The terms and conditions of this acquisition or easement shall be as described in Paragraph 1 of BIO-20 [Mohave ground squirrel Compensatory Mitigation], with the additional criteria to include: 1) the mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must either currently support burrowing owls or be within dispersal distance of areas occupied

by burrowing owls ~~from an active burrowing owl nesting territory~~ (generally approximately 5 miles). The burrowing owl mitigation lands may be included with the Mohave ground squirrel mitigation lands ONLY if these two burrowing owl criteria are met. If the burrowing owl mitigation land is separate from the acquisition required for Mohave ground squirrel compensation lands, the Project owner shall fulfill the requirements described below in this condition.

...

F. Avian And Bat Protection Plan / Monitoring Bird And Bat Impacts From Solar Technology

The PSA did not contain a requirement for an Avian and Bat Protection Plan, and BIO-24 is a new requirement that has been added to the FSA based on recent USFWS guidance. Applicant has suggested that some of the descriptive language of what needs to be in the plan be deleted. The proposed Condition already requires that study design must be approved by resource agencies and the CEC. Therefore, it is requested that specific studies not be referenced and instead this level of detail be left for the plan review process.

BIO-24 The project owner shall prepare and implement an Avian and Bat Protection Plan to monitor bird and bat collisions with facility features (study described below). The Project owner shall use the monitoring data to inform and develop an adaptive management program that would avoid and minimize Project-related avian and bat impacts. Project-related bird and bat deaths or injuries shall be reported to the CPM, CDFG and USFWS. The CPM, in consultation with CDFG and USFWS, shall determine if the Project-related bird or bat deaths or injuries warrant implementation of adaptive management measures contained in the Avian and Bat Protection Plan. The study design for the Avian and Bat Protection Plan shall be approved by the CPM in consultation with CDFG and USFWS, and, once approved, shall be incorporated into the project's BRMIMP and implemented. The Plan shall include adaptive management strategies that include the placement of bird flight diverters, aerial markers, or other strategies to minimize collisions with the solar arrays.

The Avian and Bat Protection Plan shall include a Bird and Bat Monitoring Study to monitor the death and injury of birds from collisions with facility features such as reflective mirror-like surfaces. The study design shall be approved by the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. ~~The Bird Monitoring Study shall be based upon prior studies by McCrary et al. (1986) or other applicable literature, and shall include detailed~~

~~specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias and proposed disposition of dead or injured birds.~~

...

G. Closure Plan Measures

It is unreasonable to provide the funding prior to the start of construction since the Applicant will not know what the specific decommissioning measures will be or what they will cost prior to initiating ground disturbing activities. The Biological Resources Element, which addresses biological resources-related issues associated with facility closure, is not due until 12 months prior to commencement of planned closure activities. The financial assurances would be provided at that time.

BIO-25 The project owner shall implement and incorporate into the facility closure plan measures to address the local biological resources related to facility closure. A funding mechanism shall be developed in consultation with the Energy Commission staff to ensure sufficient funds are available for revegetation, reclamation, and decommissioning if the project site will not be re-powered or developed. The facility closure plan shall address biological resources-related mitigation measures. In addition to these measures, the plan shall include the following:

1. Removal of transmission conductors when they are no longer used and useful;
2. Removal of all above-ground and subsurface power plant site facilities and related facilities;
3. Methods for restoring wildlife habitat and promoting the re-establishment of native plant and wildlife species;
4. Revegetation of the project site and other disturbed areas utilizing appropriate methods for establishing native vegetation if the site will not be repowered or developed; and
5. A cost estimate to complete closure-related activities.

In addition, the project owner shall secure funding to ensure implementation of the plan and provide to the CPM written evidence of the dedicated funding mechanism(s).

Verification: ~~Prior to initiating ground disturbing project activities, the project owner shall provide financial assurances to~~

~~the CPM to guarantee that an adequate level of funding will be available to implement decommissioning and closure activities described above. The financial assurances may be in the form of an irrevocable letter of credit, a performance bond, a pledged savings account, or another equivalent form of security, as approved by the CPM.~~

At least 12 months prior to commencement of planned closure activities, the project owner shall address all biological resources-related issues associated with facility closure, and provide final measures, in a Biological Resources Element. The draft planned permanent or unplanned closure measures shall be submitted to the CPM for comment by staff, CDFG, and USFWS. After revision, final measures shall comprise the Biological Resources Element, which shall include the items listed above as well as written evidence of the dedicated funding mechanism(s) for these measures. The final Biological Resources Element shall become part of the facility closure plan, which is submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.

In the event of an unplanned permanent closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan (see Compliance Conditions of Certification).

Upon facility closure, the project owner shall implement measures in the Biological Resources Element and provide written status updates on all closure activities to the CPM at a frequency determined by the CPM.

V. GEOLOGY & PALEONTOLOGY

A. PAL-4

The Applicant submitted comments on PAL-4 on February 8, 2010 (Exhibit 99) and discussed the requested changes at the PSA Workshop. PAL-4 requires having to produce a video for CPM approval prior to the start of training, since often the video is filmed during the initial training exercise. Instead, the Applicant seeks to have the script and/or training materials approved in advance, but not the actual video. Similar modifications were accepted for the Beacon Solar Energy Project (08-AFC-2). The Applicant proposes the following revised version.

PAL-4 Prior to ground disturbance and for the duration of construction activities involving ground disturbance, the project owner and the PRS shall prepare and conduct weekly CPM-

approved training for the following workers: project managers, construction supervisors, foremen, and general workers involved with or who operate ground-disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of ~~a CPM-approved video or in-person presentation~~ training based on a CPM-approved video script or other presentation materials. Following initial training, a CPM-approved video, other approved training presentation, or in-person training may be used for new employees. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or other areas of interest or concern. No ground disturbance shall occur prior to CPM approval of the Worker Environmental Awareness Program (WEAP), unless specifically approved by the CPM.

...

Verification: At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP, including the brochure, with the set of reporting procedures for workers to follow.

At least 30 days prior to ground disturbance, the project owner shall submit the training program presentation/materials script and final video to the CPM for approval if the project owner is planning to use a presentation format other than a video for a video for interim-training or a script if a video is to be used for training.

If the owner requests an alternate paleontological trainer, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval prior to installation of an alternate trainer. Alternate trainers shall not conduct training prior to CPM authorization.

In the monthly compliance report (MCR), the project owner shall provide copies of the WEAP certification of completion forms with the names of those trained and the trainer or type of training (in-person or other approved presentation format-video) offered that month. The MCR shall also include a running total of all persons who have completed the training to date.

VI. HAZARDOUS MATERIALS

1. HAZ-2

Subsequent to the PSA, Condition HAZ-2 has been modified to require the preparation of a Process Safety Management (PSM) Plan for the HTF system based on the belief that HTF is “highly

flammable” (ref. pages 4.4-9, 4.4-19). According to the OSHA PSM regulations, 29 CFR 1910.119 (which cross-references 1910.1200(c)), a flammable liquid is “any liquid having a flashpoint below 100 °F (37.8 °C), except any mixture having components with flashpoints of 100 °F (37.8 °C) or higher, the total of which make up 99 percent or more of the total volume of the mixture”. According to the MSDS for Therminol VP-1®, the flash point of the material is 230°F (110°C). Because Therminol is not classified as a flammable liquid, PSM regulations do not apply to the facility for this material. There are no other materials planned for use at the facility that would exceed their applicable PSM threshold.

Staff’s proposed HAZ-2 also now requires the preparation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan. Pursuant to 40 Code of Federal Regulations §112.1(d)(1)(i), the SPCC regulations do not apply to “[A]ny onshore or offshore facility, that due to its location, could not reasonably be expected to have a discharge as described in paragraph (b) of this section. This determination must be based solely upon consideration of the geographical and location aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and must exclude consideration of manmade features such as dikes, equipment or other structures, which may serve to restrain, hinder, contain, or otherwise prevent a discharge as described in paragraph (b) of this section.” The PHPP facility is over 11 miles from the nearest navigable water. Based on this distance and the intervening topography, it is reasonable to conclude that a spill from the facility could not impact navigable waters. Accordingly, the Applicant requests that the requirement to prepare an SPCC Plan be deleted from the condition.

Consequently, the Applicant requests that HAZ-2 be modified to eliminate the PSM and SPCC requirements, as shown below.

HAZ-2 The project owner shall provide a Business Plan, ~~a Spill Prevention, Control, and Countermeasure Plan (SPCC), a Process Safety Management Plan (PSMP)~~ and a Risk Management Plan (RMP) to the Health Hazardous Materials Division of the Los Angeles County Fire Department and the CPM for review. After receiving comments from the Health Hazardous Materials Division of the Los Angeles County Fire Department and the CPM, the project owner shall reflect all recommendations in the final documents. Copies of the final plans shall then be provided to the Health Hazardous Materials Division of the Los Angeles County Fire Department for information and to the CPM for approval.

Verification: At least thirty (30) days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final Business Plan to the CPM for approval.

At least thirty (30) days prior to delivery of aqueous ammonia to the site, the project owner shall provide the final RMP to the CUPA for information and to the CPM for approval.

~~At least thirty (30) days prior to delivery of Therminol to the site, the project owner shall provide the final PSM Plan and SPCC Plan to the CUPA for information and to the CPM for approval.~~

B. HAZ-9

Applicant continues to believe that if a security guard is present on-site 24/7, that it is not necessary to have CCTV cameras or breach detectors around the power block as well as the solar field for such a relatively small (333 acre) facility that does not contain significant quantities of hazardous materials (e.g., aqueous ammonia) and no extremely hazardous materials. The intent of CFR Part 27 Interim Final Rules on power plant security is to protect the public against major releases of extremely hazardous materials.

In the alternative, if Staff continues to require CCTV cameras, in discussions between the City and U.S. Air Force Plant 42 (see Exhibit 106), it was determined that CCTV cameras should not be placed along the fences that border Plant 42 (e.g., along the southern and eastern perimeter fences of the plant site). The change that was made by the CEC to the FSA HAZ-9 condition, sub-item 10, adds a reference to CCTV cameras monitoring the northern and eastern borders of the plant site. If Staff continues to require CCTV cameras, Applicant requests the CCTVs should be limited only to the northern and western borders of the plant site and should not be placed along the eastern border (which is the border adjacent to Plant 42) in accordance with Plant 42 communications.

VII. POWER PLANT RELIABILITY

A. Page 5.4-5

Under “Water Supply Reliability” (top of Page 5.4-5) the FSA describes a “new 4,700 foot, 16-inch diameter recycled water pipeline” for cooling tower make-up from the PWRP. The recycled water pipeline is actually 7.4 miles long and 14 inches in diameter. It is the sanitary wastewater pipeline that is 4,700 feet long. but six inches in diameter.

The Applicant proposes the following revisions to Page 5.4-5:

The PHPP will use recycled water from the City of Palmdale Water Reclamation Plant via a new ~~4,700-foot long, 16-inch diameter~~ 7.4 mile long, 14 inch diameter pipeline for cooling tower makeup and other industrial uses. There is a signed agreement between the applicant and the County of Los Angeles to provide the necessary quantities of water (COP 2010a). Therefore, staff believes the source of water supply represents a reliable source for the project. For further discussion of water supply, see the **SOIL AND WATER RESOURCES** section of this document.

VIII. TRAFFIC & TRANSPORTATION

A. TRANS-1

Applicant’s requests the following revision to TRANS-1 to correct what Applicant believes

to be a typographical error limiting construction traffic to only the stated specific route. TRANS-1 further restricts the traffic such that it cannot use this route during peak hour traffic, which would make it infeasible for construction workers to access the site during peak travel periods. The traffic analysis in the AFC demonstrated that traffic could be routed on other roads where it would not cause significant impacts. The CPM can verify that the selected traffic control plan is consistent with the traffic analysis.

The Applicant proposes the following revisions:

TRANS-1 The project owner shall prepare and implement a construction traffic control plan. The traffic control plan must include but not be limited to the following issues:

- Prepare and distribute a map of the route for construction workers to use to access the proposed project site ~~(SR-14 to Avenue M to the PHPP site;~~
- Make improvements to East Avenue M (e.g. turn and acceleration/deceleration lanes) consistent with existing project access features to allow for safe arrival/departure to/from the project site;
- Limit heavy equipment and building materials deliveries to between 9:30 am and 3:30 pm, per Palmdale General Plan Circulation Element, to minimize impacts and route truck traffic around residential development;
- Provide signing, lighting, and traffic control device placement during construction impacting regional and local roadways;
- Ensure construction traffic avoids using the SR-14 on and off-ramps to East Avenue M and the intersection of Sierra Highway and East Avenue M during peak morning and afternoon traffic periods;
- Traffic diversion plans (in coordination with the cities of Palmdale and Lancaster) to ensure access during temporary lane/road closures;
- Ensure ~~of~~ access for emergency vehicles to the project site;
- Ensurance of pedestrian and bicycle safety from construction vehicle travel routes and any construction-related temporary travel lane closures or disruptions;
- Temporary closure of travel lanes or disruptions to street segments and intersections during reductoring activities or any other utility tie- ins;
- Establish a parking plan for workers, construction vehicles, and trucks during transmission line and pipeline construction;
- Installation of the natural gas pipeline and water line to occur during nonpeak hours; and

- Use flagging, flag men, signage and cover open trenches when needed.

Verification: At least 90 days prior to the start of site mobilization, the project owner shall submit a traffic control plan that outlines each component above to Caltrans and the cities of Palmdale and Lancaster Planning Departments for review and comment and to the CPM for review and approval. The proposed route for construction traffic shall be based on the traffic analyses prepared for the project or as approved by the CPM. The project owner shall provide the CPM with any comments from Caltrans and the cities of Palmdale and Lancaster.

B. TRANS-8

The FSA contains several new proposed conditions related to U.S. Air Force comments regarding the potential for glint and glare impacts that were not in the PSA. Rather than an overall rationale for the changes, the rationale is provided before each change below.

TRANS-8 Prior to the start of construction, the project owner shall provide a plan to the CPM and the Air Force Plant 42 Commander identifying all reasonable measures the project owner will take to minimize the creation of glint and glare on Air Force Plant 42 airfield traffic including, but not limited to, the following:

Ensure the mirrors are (1) brought out of stowage before sunrise and are aligned to catch the first rays of the morning sun; and (2) returned to stow position after sunset.

Operating mirrors have a heat transfer fluid operating at high temperature within a heat transfer tube. It would be a safety hazard to immediately enclose a malfunctioning mirror in a cover once a mirror malfunctioned because the hot HTF would continue to flow through the tube of the malfunctioning mirror. The subsequent buildup of heat beneath the cover would pose a fire hazard and the action of covering a malfunctioning mirror in an operating mirror array would pose an unacceptable risk to workers of burns and eye injury from adjacent operating mirrors. The most prudent action is to rotate the mirrors off-axis to the east away from the sun.

The Applicant proposes the following revisions:

1. Ensure mirrors are continuously monitored for malfunctions and remain properly aligned with the sun. Acquire appropriate equipment and establish procedures to ~~cover inoperative or malfunctioning mirrors immediately after malfunctions are discovered to prevent~~ minimize the escape of errant reflections from malfunctioning mirrors by rotating the mirrors off-axis to the east away from the sun as soon as practicable during times of day that could be problematic.
2. Minimize reflections from bellows shields by using a non-reflective or diffuse material or coating (for example, paint) for the shields.

During specific configurations/time of day, glint from the solar field is momentary but unavoidable. What needs to be minimized is the creation of enhanced glint due to mirror malfunctions and purposeful off-axis movements. In addition, all landing and takeoff operations are critical flight operations. The condition as written could be read as requiring nearly continuous notification to the control tower of mirror movement and operational activities whenever an aircraft is in the traffic pattern or is preparing for takeoff. The communication between the PHPP operator and the control tower should be used primarily to notify the control tower of significant operating conditions that may pose an enhanced risk for glint during landing and take-off flight operations. Anything else will produce an undue burden for the control tower staff and distract them from their primary duties.

The Applicant proposes the following revisions:

3. Ensure PHPP operator establishes and maintains a communication link with Air Force Plant 42 control tower to ~~ensure that when necessary mirrors are positioned so as not to interfere with critical flight operations~~ allow the control tower to be notified of significant operational issues that have the potential to enhance the risk from glint to aircraft during landing and takeoff operations.
4. Establish procedures to avoid glare when intentionally moving individual collectors off-axis to “dump” power incident on the heat collection elements during periods of high insolation.

The risk of glare from a given mirror depends not on distance from the runway and landing pattern but rather on the time of day (i.e., sun elevation), day of year (i.e., solar azimuth), aircraft altitude and bearing from the mirror (i.e., sun-mirror-aircraft geometry), and the runway in use (i.e., how that geometry is changing). Thus, a simple condition to rotate the farthest northwest mirrors first does not improve safety and could impair the ability of the plant operator to move the mirror producing the greatest potential hazard first. In addition, the desired direction of movement of the mirror should always be to the east, away from the sun. A mandatory movement of the mirror to the west has the potential for allowing the sun’s movement to catch up with the mirror and produce an on-axis mirror later in the day. Glare from a mirror will only occur during the day when the sun is above the horizon so nighttime mirror malfunctions have no potential to produce glint and glare unless the malfunction extends into the next day. An example of daytime mirror malfunction that is not significant and should not require notification is a stowed mirror that cannot move. Such a mirror cannot produce a glare that could interfere with flight operations and is an operational problem only.

The Applicant proposes the following revisions:

If the plant operator needs to dump power and rotate several modules off-axis, the Operator will develop a plan to ensure the safe movement of the modules to the east. The rotation should be coordinated with the Air Force Plant 42 control tower to ensure that the movement does not affect aircraft currently in the flight traffic pattern. ~~the operator shall start with the modules at the north-most and west-most parts of the collector field, which is furthest from~~

~~the Air Force Plant 42 to the southeast. For each module that is rotated off-axis, the operator shall consider the nearest flight pattern; if it is to the east, then the module shall be rotated to the west, and vice versa. This rotating shall be done in a manner that minimizes the impact of glare on aircraft (for example, rotating modules furthest from the airport in a direction that is away from flight patterns).~~

In addition, this plan shall include specific provisions for tracking and compiling data involving ~~any and all~~ significant daytime mirror malfunctions that have the potential to enhance the potential for glare to occur from the mirrors. This data shall include the (1) date, time and location of offending mirror or mirrors; (2) specific adjustments made to correct each mirror or mirrors; (3) date and time specific adjustments were evaluated for effectiveness; and (4) effectiveness of each adjustment. That information shall be included in the monthly compliance reports during construction and in the semi-annual compliance reports during operation. This information will be used to ensure that the offending mirrors are quickly adjusted, thereby having a minimum impact on flight operations. In addition, this information will provide data for the plant operator to use in monitoring mirror operations and preventing malfunctions.

C. TRANS-9

Notifying the Commander and initiating corrective actions within 24 hours establishes a reasonable timeframe, however, the ordering and replacing or repairing of broken mirror tracking motors, drive gears, or other components could take much longer.

The Applicant proposes the following revisions:

TRANS-9 Throughout the construction and operation of the project, the project owner shall work with the Air Force Plant 42 Commander or his or her designated representative to develop and implement a process for documenting, investigating, evaluating, and resolving all project-related glare complaints.

The project owner or authorized agent shall:

...

3. If glint or glare is project-related, project owner shall take all feasible measures to reduce glint and glare at its source within 24 hours, or will notify the Commander as soon as possible when such measures can be completed.

IX. TRANSMISSION LINE SAFETY & NUISANCE

A. TLSN-4

Condition TSLN-4 requires the project owner to ensure the transmission line right of way is kept free of combustible material, etc. The ownership as well as operation and maintenance of all or portions of the transmission line may be transferred to SCE or another transmission system operator, this requirement should be the responsibility of the owner of the line, not the Applicant.

The Applicant proposes the following revisions:

TLSN-4 The project owner shall ensure that the rights-of-way of those portions of the transmission line that are under the Project owner's control are kept free of combustible material, as required under the provisions of section 4292 of the Public Resources Code and section 1250 of Title 14 of the California Code of Regulations.”

X. VISUAL RESOURCES

A. VIS-2

VIS-2 requires four additional simulations (one for each KOP) with as-built facility materials and colors, regardless of whether there has been a substantive change from the simulations previously provided. This requirement would be costly. Applicant requests that Applicant provide samples of materials and colors for review along with completed AFC simulations.

The Applicant proposes the following revisions:

VIS-2 – (E) In the event that color treatments or textures differ substantially from what was proposed by the Applicant in the AFC or in subsequent submittals, One set of 11” x 17” color photo simulations at life size scale of the proposed treatment for project structures, including structures treated during manufacture, from the Key Observation Points;

XI. WASTE MATERIALS

A. WASTE-2:

This condition requires that sampling and analysis be consistent with the DTSC's "Interim Guidance for Sampling Agricultural Fields for School Sites" or equivalent. The Applicant believes this guidance document is not directly applicable to the PHPP transmission line route because most of the transmission corridor lands are unoccupied. The guidance is intended for school locations, not properties with no occupancy (such as the transmission lines and lay down areas). The Applicant proposes that a professional engineer or professional geologist prepare an appropriate sampling and analysis plan in accordance with industry norms for unoccupied sites.

The Applicant proposes the following revisions:

WASTE-2 In areas where the land has been or is currently being farmed, and where excavation or significant ground disturbance will occur for the construction of the project transmission line, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any material levels of contamination.

The sampling and testing plan shall be prepared in consultation with the appropriate Los Angeles County agency, conducted by an appropriate California licensed professional, and sent to a California Certified laboratory for testing. Sampling and analysis shall be consistent with ~~the DTSC's 'Interim Guidance for Sampling Agricultural Fields for School Sites (Third Revision)' or equivalent~~ industry norms for sites having no occupancy. A report documenting the areas proposed for sampling, and the process used for sampling and testing shall be submitted to the Energy Commission for review and approval at least 90 days before transmission line construction occurs in the affected areas.

DATED: January 12, 2011

Respectfully submitted,

/S/ Michael J. Carroll

Michael J. Carroll
LATHAM & WATKINS LLP
Counsel to Applicant

**STATE OF CALIFORNIA
ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

In the Matter of:)	Docket No. 08-AFC-9
)	
Application for Certification,)	PROOF OF SERVICE
for the CITY OF PALMDALE HYBRID)	
POWER PLANT PROJECT)	(Revised January 5, 2011)
)	
_____)	

APPLICANT

Thomas M. Barnett
Executive Vice President
Inland Energy, Inc.
3501 Jamboree Road
South Tower, Suite 606
Newport Beach, CA 92660
tbarnett@inlandenergy.com

Antonio D. Penna Jr.
Vice President
Inland Energy
18570 Kamana Road
Apple Valley, CA 92307
tonypenna@inlandenergy.com

Laurie Lile
Assistant City Manager
City of Palmdale
38300 North Sierra Highway, Suite A
Palmdale, CA 93550
llile@cityofpalmdale.org

APPLICANT'S CONSULTANTS

Sara Head
Vice President
AECOM
1220 Avenida Acaso
Camarillo, CA 93012
Sara.Head@aecom.com

PALMDALE HYBRID POWER PROJECT
CEC Docket No. 08-AFC-09

INTERESTED AGENCIES

Ronald E. Cleaves, Lt. Col, USAF

Commander ASC Det 1 Air Force Plant 42
2503 East Avenue P
Palmdale, CA 93550
Ronald.Cleaves@edwards.af.mil

Erinn Wilson

Staff Environmental Scientist
California Department of Fish and Game
18627 Brookhurst Street, #559
Fountain Valley, CA 92708
E-mail preferred
EWilson@dfg.ca.gov

Richard W. Booth

Sr. Geologist
Lahontan Regional
Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150-2306
rbooth@waterboards.ca.gov

Rick Buckingham

State Water Project
Power & Risk Office
3310 El Camino Avenue, LL-90
Sacramento, CA 95821
E-mail preferred
rbucking@water.ca.gov

Manuel Alvarez

SoCal Edison
1201 K Street
Sacramento, CA 95814
Manuel.Alvarez@sce.com

Robert C. Neal, P.E.

Public Works Director
City of Lancaster
44933 Fern Avenue
Lancaster, CA 93534-2461
rneal@cityoflancafterca.org

PALMDALE HYBRID POWER PROJECT
CEC Docket No. 08-AFC-09

California ISO
P.O. Box 639014
Folsom, CA 95763-9014
e-recipient@caiso.com

Robert J. Tucker
SoCal Edison
1 Innovation Drive
Pomona, CA 91768
Robert.Tucker@sce.com

Christian Anderson
Air Quality Engineer
Antelope Valley AQMD
43301 Division St, Suite 206
Lancaster, CA 93535
E-mail preferred
canderson@avaqmd.ca.gov

Keith Roderick
Air Resources Engineer
Energy Section/Stationary Sources
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812
E-mail preferred
kroderic@arb.ca.gov

INTERVENORS

Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
lbelenky@biologicaldiversity.org

Jane Williams
Desert Citizens Against Pollution
Post Office Box 845
Rosamond, CA 93560
dcapjane@aol.com

PALMDALE HYBRID POWER PROJECT
CEC Docket No. 08-AFC-09

ENERGY COMMISSION

Jeffrey D. Byron

Commissioner and Presiding Member
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
jbyron@energy.state.ca.us

Anthony Eggert

Commissioner and Associate Member
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
aeggert@energy.state.ca.us

Ken Celli

Hearing Officer
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
kcelli@energy.state.ca.us

Kristy Chew

Advisor to Commissioner Byron
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
kchew@energy.state.ca.us

Lorraine White

Advisor to Commissioner Eggert
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
E-mail preferred
lwhite@energy.state.ca.us

PALMDALE HYBRID POWER PROJECT
CEC Docket No. 08-AFC-09

Felicia Miller
Project Manager
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
fmiller@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
ldecarlo@energy.state.ca.us

Jennifer Jennings
Public Adviser
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, California 95814-5512
Publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Paul Kihm, declare that on January 12, 2011, I served and filed copies of the attached:

APPLICANT'S RESPONSE TO FINAL STAFF ASSESSMENT

to all parties identified on the Proof of Service List above in the following manner:

California Energy Commission Docket Unit

- Transmission via electronic mail and by depositing a copy with FedEx overnight mail delivery service at Costa Mesa, California, with delivery fees thereon fully prepaid and addressed to the following:

CALIFORNIA ENERGY COMMISSION

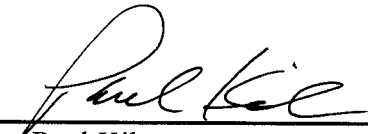
Attn: DOCKET NO. 08-AFC-09
1516 Ninth Street, MS-4
Sacramento, California 95814-5512
docket@energy.state.ca.us

For Service to All Other Parties

- Transmission via electronic mail to all email addresses on the Proof of Service list; and
- by depositing one paper copy with the United States Postal Service via first-class mail at Costa Mesa, California, with postage fees thereon fully prepaid and addressed as provided on the Proof of Service list to those addresses **NOT** marked "email preferred."

I further declare that transmission via electronic mail and U.S. Mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 12, 2011, at Costa Mesa, California.



Paul Kihm