

STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

DOCKET
09-AFC-7

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In the Matter of:

Application for Certification
For the Palen Solar Power Project

Docket No. 09-AFC-7

**Energy Commission Staff's Comments on the Presiding Member's
Proposed Decision for the Palen Solar Power Project
and Supplemental Air Quality Testimony**

On November 12, 2010, the Committee overseeing the Palen Solar Power Project issued the Presiding Member's Proposed Decision and directed the parties to file any comments by November 29, 2010. Staff's comments are provided below, with explanations for the suggested changes where not self-evident.

Staff expects to receive the South Coast Air Quality Management District's Final Determination of Compliance (FDOC) in the next few days and anticipates filing supplemental testimony to reflect any changes contained in the FDOC no later than December 1, 2010.

Transmission System Engineering

Page 11, TSE-5 Verification, #6 should be removed as follows.

~~6. The final Phase II Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable, and~~

Explanation: Staff has already received the final Phase II Study and the requirement for the special protection system sequencing and timing is already contained in #4, therefore this paragraph is no longer needed.

Greenhouse Gas Emissions

Page 1, Paragraph 3:

SB 1368, enacted in 2006, and regulations adopted by the Energy Commission and the Public Utilities Commission pursuant to the bill, prohibits California utilities from entering into long-term commitments with any base load facilities that exceed the Emission Performance Standard of 0.500 metric tonnes CO₂ per megawatt-hour (1,100 pounds CO₂/MWh). Specifically, the SB 1368 Emission Performance Standard (EPS) applies to base load power from new power plants, new investments in existing power plants, and new or renewed contracts with terms of five years or more, including contracts with power plants located outside of California. If a project, instate or out of state, plans to sell base load electricity to a California utility that utility will have to demonstrate that the project meets the EPS. *Base load* units are defined as units that operate at a capacity factor higher than 60 percent. As a renewable electricity generating facility, PSPP is determined by rule to be compliant with the SB 1368 EPS. In addition, as a solar project with a nightly shutdown that would operate at less than 60 percent of capacity, it is not subject to the requirements of SB 1368 (Chapter 11, Greenhouse Gases Emission Performance Standard, Article 1, Section 2900 et. seq.). Nonetheless, the PSPP would easily comply with the requirements of SB 1368 and the Greenhouse Gas Emission Performance Standard.

Explanation: This corrects the incomplete interpretation of how the project complies with SB 1368.

Page 2, Paragraph 1:

The regulated greenhouse gases are carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFC), and perfluorocarbons (PFC). CO₂ emissions are far and away the most common of these emissions; as a result, even though the other GHGs have a greater impact on climate change on a per-unit basis, GHG emissions are often expressed in terms of “metric tons of CO₂-equivalent” (MTCO₂e) for simplicity. (Ex. 300, p. C.1-74.)

Page 2, Paragraph 3, Bullet 1:

In this part of the Decision we consider:

- Whether PSPP GHG construction and operation emissions will have significant impacts;

Page 3, Paragraph 3:

c. Emissions Performance Standard

Senate Bill (SB) 1368 of 2006, and regulations adopted by the Energy Commission and the Public Utilities Commission pursuant to the bill, prohibits utilities from entering into long-term commitments with any base load facilities that exceed an Emission Performance Standard (EPS) of 0.500 metric tonnes of CO₂ per megawatt-hour (this is the equivalent of 1100 pounds CO₂/MWh). (Pub. Util. Code, § 8340 et seq.; Cal. Code Regs., tit. 20, § 2900 et seq.; CPUC D0701039.) Currently, the EPS is the only LORS that has the effect of limiting power plant GHG emissions. PSPP, as a renewable energy generation facility, is determined by rule to comply with the Greenhouse Gas Emission Performance Standard requirements of SB 1368 (Chapter 11, Greenhouse Gases Emission Performance Standard, Article 1, Section 2903 [b][1]).~~PSPP is exempt from SB 1368 because it would operate at or below a 60 percent capacity factor.~~ (Ex. 300, p. C.1-74.)

Explanation: This corrects the incomplete interpretation of how the project complies with SB 1368, and corrects per the exhibit citation given.

Page 3, Paragraph 3:

There is no adopted, enforceable federal or state LORS applicable to PSPP construction emissions of GHG. ~~Nor is there a quantitative threshold over which GHG emissions are considered “significant” under CEQA.~~ Nevertheless, there is guidance from regulatory agencies on how the significance of such emissions should be assessed. For example, the most recent guidance from CARB staff recommends a “best practices” threshold for construction emissions. [CARB, Preliminary Draft Staff Proposal, Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act (Oct. 24, 2008), p. 9]. Such an approach is also recommended on an interim basis, or proposed, by major local air districts.

Explanation: The statement is not strictly correct. ARB and SCAQMD both have draft quantitative thresholds that could be used to assess industrial project construction and operation GHG emissions over the project life. However, staff does not consider those criteria relevant for power plant projects that need to be assessed in the context of the operation of the entire electricity system.

4. Direct/Indirect Operation Impacts and Mitigation:

 a. Anticipated Emissions

For this solar project the primary fuel, solar energy, is greenhouse gas-free, but there are two propane-fired steam boilers for HTF freeze protection. (Ex. 318, p. C.1-2.) The proposed PSPP Project would cause GHG emissions from these propane-fired boilers, and gasoline and diesel fuel use in the maintenance vehicles, offsite delivery vehicles, staff and employee vehicles, the ~~two~~~~four~~ emergency fire water pump engines, and ~~two~~~~four~~ emergency generator engines. Another GHG emission source for this proposed project is SF₆ from electrical equipment leakage. (Ex. 300, p. C.1-79) Operations GHG emissions are shown in Staff's **Greenhouse Gas Table 3**. All emissions are converted to CO₂-equivalent and totaled.

Page 13-14, Findings of Fact:

1. The GHG emissions from the PSPP project construction are likely to be 101,000 MTCO₂ equivalent (“MTCO₂E”) during the 39-month construction period.
- ~~2. There is no numerical threshold of significance under CEQA for construction-related GHG emissions.~~
- ~~23.~~ PSPP will use best practices to control its construction-related GHG emissions.
- ~~34.~~ Construction-related GHG emissions are less than significant if they are controlled with best practices.
- ~~45.~~ State government has a responsibility to ensure a reliable electricity supply, consistent with environmental, economic, and health and safety goals.
- ~~56.~~ California utilities are obligated to meet whatever demand exists from any and all customers.
- ~~67.~~ Under SB 1368 and implementing regulations, California’s electric utilities may not enter into long-term commitments with base load power plants with CO₂ emissions that exceed the Emissions Performance Standard (“EPS”) of 0.500 MTCO₂ / MWh.
- ~~78.~~ The maximum annual equivalent CO₂ emissions from PSPP operation will be 14,818 MTCO₂E₂, which constitutes an emissions performance factor of 0.015 MTCO₂E₂ / MWh.

- ~~89.~~ PSPP is determined by rule to be compliant with the SB 1368 EPS. ~~The SB 1368 EPS is not applicable to PSPP GHG emissions because the project will be shut down nightly.~~
- ~~910.~~ AB 32 requires CARB to adopt regulations that will reduce statewide GHG emissions, by the year 2020, to the 1990 level. Executive Order S-3-05 requires a further reduction, by the year 2050, to 80 percent below the 1990 level.
- ~~1011.~~ The California Renewable Portfolio Standard (RPS) requires the state's electric utilities obtain at least 33 percent of the power supplies from renewable sources, by the year 2020.
- ~~1112.~~ California's power supply loading order requires California utilities to obtain their power first from the implementation of all feasible and cost-effective energy efficiency and demand response, then from renewables and distributed generation, and finally from the most efficient available fossil-fired generation and infrastructure improvement.
- ~~1213.~~ There is no evidence in the record that construction or operation of PSPP will be inconsistent with the loading order.
- ~~1314.~~ When it operates, PSPP will displace generation from ~~less efficient (i.e., higher-heat rate and therefore higher-GHG-emitting)~~ power plants.
- ~~1415.~~ PSPP will replace power from coal-fired power plants that will be unable to contract with California utilities under the SB 1368 EPS, and from once-through cooling power plants that must be retired.
- ~~1516.~~ PSPP operation will reduce overall GHG emissions from the electricity system.
- ~~1617.~~ The role of fossil fuel-fired generation will diminish as technology advances, coupled with efficiency and conservation measures, make round-the-clock availability of renewables generation feasible.

Page 15, Conclusions of Law:

- ~~2.~~ ~~The GHG emissions from a power plant's operation should be assessed in the context of the operation of the entire electricity system of which the plant is an integrated part.~~
- ~~23.~~ PSPP operational GHG emissions will not cause a significant environmental impact.

34. As a renewable electricity generating facility, PSPP is determined by rule to be compliant with SB 1368.~~The SB 1368 EPS does not apply to PSPP, but if it did PSPP GHG emissions will meet it.~~
45. PSPP operation will help California utilities meet their RPS obligations.
56. PSPP operation will be consistent with California’s loading order for power supplies.
67. PSPP operation will foster the achievement of the GHG goals of AB 32 and Executive Order S-3-05.
78. The GHG emissions of any power plant must be assessed within the context of the entire electricity system on a case-by-case basis to ensure that the project will be consistent with applicablethe goals and policies ~~enunciated above.~~
89. PSPP will~~Any new power plant that we certify must:~~
- a) not increase the overall system heat rate;
 - b) not interfere with generation from existing renewables or with the integration of new renewable generation; and
 - c) have the ability to reduce system-wide GHG emissions.

Explanation: The original second and eighth conclusions are redundant. Staff recommends that the second conclusion be deleted.

Air Quality

Pages 3 and 4, Air Quality Tables 1 and 2:

PM2.5 should not be subscript.

Pages 7 and 10, Air Quality Tables 4 and 6:

The symbol for micro (μ) for “μg/m³” should be corrected in the first row of these two tables.

Page 11, paragraph 3:

We concur with the District’s revised determination that VOC offsets are required for the project to comply with the District’s New Source Review rule. VOC ERCs are the most abundant type of ERC in the SCAQMD offset bank and the Applicant should be able to obtain these ERCs in a timely manner (Ex. 317, p. C.1-6). The District will not provide

the Permit to Construct for PSPP until the ERC sources are properly identified (purchased ERCs or right to purchase contracts for ERCs); therefore, we believe that this LORS issue will be properly satisfied by the District. Condition of Certification AQ-SC9 has been included so that staff will get a copy of the ERC identification provided to the District in order to obtain the Permit to Construct. However, consistent with Staff's finding for other projects that need District offsets, the final air quality findings for this project are tentative, pending the Applicant's submittal of its ERC source, which can be purchased ERCs or right to purchase contracts for ERCs. (Ex. 317, p. C-1-8.)

Explanation: The District will not provide the Permit to Construct for PSPP until the required VOC ERC sources are determined and submitted to the District. Therefore, staff believes that, since these offsets are solely a District LORS requirement and not considered necessary as a CEQA mitigation, the air quality findings are not tentative and the paragraph can be revised as suggested.

Page 14, Findings of Fact #9 and #10:

9. ~~The South Coast Air Quality Management District~~Mojave Desert Air Quality Management District issued a ~~Revised~~Preliminary Determination of Compliance on ~~October 21~~March 5, 2010, imposing conditions of compliance on project construction and operation to ensure compliance with District Rules and Regulations. These Rules and Regulations are incorporated into the Conditions of Certification below.
10. ~~The proposed project would be consistent with the requirements of SB-1368 and the Emission Performance Standard for greenhouse gases.~~

Explanation: This finding, which was properly addressed in the GHG section of the PMPD, is unnecessary in the Air Quality section of the PMPD. Its inclusion in the Staff Assessment is primarily done as reference to the Air Quality GHG Attachment, but in the PMPD the GHG section is provided as a wholly separate section.

Page 28, District Conditions of Certification AQ-13 and AQ-14:

AQ-13 The project owner shall limit emission from this equipment as follows:

Contaminant	Emission Limit
PM10	639 lbs in any one year
NOx	709 lbs in any one year
SOx	722 lbs in any one year

Verification:—The project owner shall calculate the monthly emissions for NOx, PM10 and SOx using the equation below and the following emission factors: NOx: 1.02 lb/1,000 gal; PM10: 0.92 lb/1,000 gal; and SOx: 1.03 lb/1,000 gal.

$$\text{Yearly Emissions, lb/year} = X (\text{E.F.})$$

where X = yearly fuel usage in 1,000 gal/year and

E.F. = emission factor indicated above.

For the purpose of this Condition, the yearly emission limit shall be defined as a period of 12 consecutive months determined on a rolling basis with a new 12-month period beginning on the first day of each calendar month.

Verification: As part of the Annual Compliance Report, the project owner shall include information demonstrating compliance with the boiler operating emission rates.

AQ-14 The project owner shall limit emission from this equipment as follows:

Contaminant	Emission Limit
PM10	53 lbs in any one month
NOx	59 lbs in any one month
SOx	60 lbs in any one month
VOC	27 lbs in any one month

Verification:—The project owner shall calculate the monthly emissions for NOx, VOC, PM10 and SOx using the equation below and the following emission factors: NOx: 1.02 lb/1,000 gal; VOC: 0.46 lb/1,000 gal; PM10: 0.92 lb/1,000 gal; and SOx: 1.03 lb/1,000 gal.

$$\text{Monthly Emissions, lb/month} = X (\text{E.F.})$$

where X = monthly fuel usage in 1,000 gal/month and

E.F. = emission factor indicated above.

Verification: As part of the Annual Compliance Report, the project owner shall include information demonstrating compliance with the boiler operating emission rates.

AQ-35 The following component count shall be used to determine the fugitive VOC emissions.

Equipment	Count (per unit)
Valves	1,969
Pump Seals	9
Connectors	2,091

Verification:—The project owner shall provide AQMD with a final component count within 90 days of completion of construction.

Verification: The project owner shall provide the District and the CPM the final HTF piping component count within 90 days of completion of construction, and shall keep a record of changes in the component count in the inspection and maintenance program documentation kept at the site.

Worker Safety and Fire Protection

Page 7, lines 3 - 5:

In the event of two or more fires at the same time, it would be even more difficult to respond because the RCFD does not have a mutual aid agreement with other fire agencies in the area and even if mutual aid was available and an “automatic aid” pact was in effect, the RCFD would still have to respond to an emergency at the PSPP site because it is the Authority Having Jurisdiction.

Page 13, Worker Safety-6:

WORKER SAFETY-6 The project owner shall:

- A. Provide a secondary site access gate for emergency personnel to enter the site. This secondary site access gate shall be at least one-quarter mile from the main gate.
- B. Provide a second access road which provides entry to the site. This road shall be at a minimum an all-weather gravel road, at least 20 feet wide, and shall come from the Interstate-10 right-of-way to the project site at the location of where the fence line of the eastern solar field comes the nearest to the I-10 right-of-way. If approved by Caltrans, Aa locked gate shall be placed in the I-10 right-of-way fence. The RCFD, the California Highway

Patrol, and the Riverside County Sheriff's Department shall be given access to the gate.

- C. Maintain the main access road and the second access road and provide a plan for construction and implementation.

Plans for the secondary site access gate, the method of gate operation, secondary gravel road, the gate at the I-10 right-of-way if approved by Caltrans, and to maintain maintenance of the roads shall be submitted to the Riverside County Fire Department for review and comment and to the CPM for review and approval.

Verification: At least 60 days prior to the start of site mobilization, the project owner shall submit to the RCFD and the CPM preliminary plans showing the location of a secondary site access gate to the site, a description of how the secondary site access gate will be opened by the fire department and other emergency services, and a description and map showing the location, dimensions, and composition of the main road, and the gravel road to the secondary site access gate.

At least 30 days prior to the start of site mobilization, the project owner shall submit the secondary access gate final plans plus the road maintenance plan to the CPM for review and approval. The final plan submittal shall also include a letter containing comments from the Riverside County Fire Department or a statement that no comments were received.

At least thirty (30) days after approval by Caltrans, the project owner shall submit final plans for the gate in the I-10 right-of-way to the Riverside County Fire Department for review and comment and to the CPM for review and approval.

Explanation: These changes were stipulated to by staff and the applicant.

Hazardous Materials

Page 3, lines 4 – 8:

On this basis Staff suggested but did not propose a Condition requiring that the project use natural gas as a safer alternative to firing the auxiliary boilers because as noted by staff, the applicant has proposed, along with staff, many safety features that reduce the risk of the use of LPG to a less than significant level. (Ex. 301, p. C.4-7.) ~~Nevertheless,~~ ~~w~~We have incorporated in our Conditions of Certification many those safety features that reduce the risk of the use of LPG to a less than significant level. (Ex. 301, p. C.4-8.)

Biological Resources

Page 6, Unvegetated Ephemeral Dry Wash:

Unvegetated dry washes include numerous smaller streams consisting largely of

compound channels with highly variable flow pathways contained within broad floodplains. Vegetative cover is typically sparse and consists primarily of mixed upland and wash-dependent shrubs and herbs, with widely scattered and small-statured individual ironwood trees. These ephemeral streams provide movement corridors for small and large mammals, and provide a seasonal water source not available in the surrounding dry uplands. (Ex.301, p. C.2-24.)

Page 7, Groundwater-Dependent Vegetation Communities, fourth sentence:

A number of GDEs were observed or documented to occur locally and could potentially be affected by proposed groundwater pumping within the proposed Project site. ~~although none of these extend into the associated disturbance areas~~ (with discussion of potential impacts to GDEs from proposed groundwater pumping provided below under Item 3, Direct/Indirect Impacts and Mitigation).

Page 7, Groundwater-Dependent Vegetation Communities, last sentence:

The phreatophytes known to occur in the Project area are mostly "facultative phreatophytes", or ~~plants that function as phreatophytes when unlimited water is available, but that can also survive on sites with limited water~~ deep rooted plant species that tap into groundwater to satisfy at least some portion of their environmental water requirement, but will also inhabit areas where their water requirements can be met by soil moisture reserves alone.

Page 24, second paragraph:

In addition to the above measures, Condition of Certification **BIO-28** provides a potential option to satisfy the requirements of Condition of Certification **BIO-12**, through provision of appropriate funding to an approved in-lieu fee program rather than~~the Renewable Energy Action Team (REAT) in lieu of~~ direct property acquisition by the Project owner.

Beginning on page 26:

American Badger and Desert Kit Fox

Potential impacts to the American badger and desert kit fox from the proposed Project and Reconfigured Alternatives 2 and 3 would include the loss of foraging and denning habitat, fragmentation and degradation of adjacent habitat, crushing or entombing of animals in dens, and disturbance/harassment of individuals (refer to Tables 4 through 6 for associated impact acreages from the proposed Project and Reconfigured Alternatives 2 and 3).- The previously identified impacts to the American badger and kit fox would be offset by implementation of the previously described Condition of Certification BIO-12, as well as ~~These potential impacts would be addressed~~ through proposed Condition of Certification BIO-17, which requires that a qualified biologist conduct pre-construction

surveys for badger and kit fox dens concurrent with desert tortoise surveys (including areas within 250 feet of all Project facilities, utility corridors, and access roads). The evidence indicates that implementation of the noted measure would reduce potential direct and indirect impacts to American badgers and desert kit foxes from the proposed Project and Reconfigured Alternatives 2 and 3 to less than significant levels. (Ex. 301, pp. C.2-113, C.2-150 – C.2-155.)

Explanation: Clarification that habitat acquired under BIO-12 will also benefit these two species and is part of the mitigation.

Page 34, second full paragraph:

The identified potential direct and indirect impacts to special-status plant species from the proposed Project or Reconfigured Alternatives 2 and 3 would be addressed through proposed Conditions of Certification, including the previously described **BIO-8**, **BIO-14**, and **BIO-20** through **BIO-24**, as well as **BIO-19** and **BIO-29**. Specifically, **BIO-19** includes requirements for: (1) impact avoidance and compensatory mitigation relative to special-status plants; and (2) late-season surveys in summer-fall 2010 to ensure that any plants missed during the spring surveys would be detected and associated potential impacts identified/mitigated. The applicant's botanists conducted complete late-season botanical surveys in the Project area on October 11, 2010 through October 15, 2010. Summer/fall annual plant species were detected in bloom and/or fruit within and in the vicinity of the Project, confirming that late season surveys were being conducted at the appropriate time, but no special-status plant species were detected in the Project area during the October 2010 surveys (Ex. 64, p. 1). Triggers and performance standards for mitigation of impacts are also included to ensure that impacts to any special status plants found during the late season surveys are appropriately addressed. The evidence indicates that implementation of the noted measures would reduce potential direct and indirect impacts to special-status plant species from the proposed Project or Reconfigured Alternatives 2 and 3 to less than significant levels. (Exs. 301, pp. C.2-119 - C.2-138, C.2-152, C.2-155; 303, pp. 16 - 17.)

Page 49, Le Conte's Thrasher:

Total impacts to Le Conte's thrasher and other special-status or migratory bird habitat from the cumulative projects would be approximately 300,139 acres in the NECO planning area, or approximately 8.1 percent of the total habitat area. While contributions to these impacts from the proposed Project or Reconfigured Alternatives 2 and 3 are generally minor (approximately 1 percent or less), they are considered, at least incrementally, cumulatively considerable. A number of measures were identified to address impacts to Le Conte's thrasher and other special-status or migratory bird habitat from the proposed Project or Reconfigured Alternatives 2 and 3, including Conditions of

Certification **BIO-8, BIO-15, BIO-16, BIO-21, BIO-23** and **BIO-24**. The evidence indicates that, with the incorporation of these mitigation measures, the contributions to Le Conte's and other special-status or migratory bird habitat loss impacts from the proposed Project or Reconfigured Alternatives 2 and 3 would not be cumulatively considerable. (Ex. 301, pp. C.2-89, C.2-188 and C.2-189.)

Page 53, Biotic Soils Crusts/Carbon Sequestration:

The proposed Project or Reconfigured Alternatives 2 and 3 are expected to contribute to a cumulative reduction in greenhouse gases, although these benefits must also be weighed against the potential loss of carbon sequestration benefits from the desert vegetation and biological soil crusts. New evidence suggests that alkaline desert soils may confer even greater sequestration benefits than soil crusts. In order to build the PSPP facility under either the proposed Project or Reconfigured Alternatives 2 and 3, these plants and biotic soil crusts would be damaged and destroyed, and the sequestered carbon would be released back into the atmosphere. Based on these considerations, staff has concluded that these impacts of the proposed Project or Reconfigured Alternatives 2 and 3 may contribute to be cumulatively considerable loss of sequestration benefits and release of stored carbon from all past, present, and probable future projects. (Ex. 301, p. C.2-139).

A number of previously identified biological resource measures would address potential contributions to cumulative impacts from the loss of sequestration benefits from the proposed Project or Reconfigured Alternatives 2 and 3. Specifically, these include Conditions of Certification **BIO-8, BIO-12, BIO-19, BIO-20, BIO-21** and **BIO-22**. The evidence indicates that, with the incorporation of these mitigation measures, contributions to the cumulative loss of carbon sequestration benefits from the proposed Project or Reconfigured Alternatives 2 and 3 would not be cumulatively considerable. (Ex. 301, p. C.2-208.)

Explanation: The original wording in the PMPD implied that the Project by itself was responsible for cumulative impacts, whereas the RSA conveys that the Project only contributes to those cumulative impacts.

Page 56, Finding of Fact #16:

Conditions of Certification **BIO-8, BIO-12, BIO-15, and BIO-16, and BIO-20** would reduce direct and indirect impacts to migratory/special-status bird species from the proposed Project and Reconfigured Alternatives 2 and 3 below a level of significance.

Explanation: Acquisition of DT habitat and desert washes would also reduce impacts to migratory/special-status birds.

Page 56, Finding of Fact #17:

16. Conditions of Certification **BIO-12 and BIO-17** would reduce direct and indirect impacts to the American badger and desert kit fox from the proposed Project and Reconfigured Alternatives 2 and 3 below a level of significance.

Explanation: Acquisition of DT habitat would also reduce impacts to kit fox and badger.

Page 56, Finding of Fact #20:

20. Conditions of Certification **BIO-8, and BIO-14, and BIO-21** would reduce Project-related direct and indirect impacts to native (but non-special-status) cacti, succulents and trees from the proposed Project and Reconfigured Alternatives 2 and 3 below a level of significance.

Explanation: Most of the trees occur in the washes, so BIO-21, which includes acquisition of desert wash woodland, also mitigates for loss of native trees.

Soil and Water Resources

Page 3, Section: 2. Soil and Erosion:

The evidence shows that Project-related erosion impacts are potentially significant. Accordingly, a Drainage Erosion and Sedimentation Control Plan (DESCP) is proposed to address potential Project-related wind and water erosion impacts. ~~The Project would also implement a Storm Water Pollution Prevention Plan (SWPPP) under National Pollutant Discharge Elimination System (NPDES) requirements to address (among other concerns) potential erosion. Both of these plans~~ This plan would include applicable measures, such as best management practices (BMPs), to identify, avoid/reduce, monitor, and document potential erosion and sedimentation effects from the PSPP Project.

Page 18, Section: 8. Surface Water Quality:

The Project applicant proposes to implement appropriate BMPs for managing potential construction-related impacts to surface water quality. This would include implementing applicable elements of the DESCP required under previously described Conditions of Certification SOIL & WATER-1, HAZ-1 and HAZ-2, ~~as well as conformance with related SWPPP requirements under the NPDES.~~

Potential impacts to surface water quality during Project operation include erosion and increases in sediment loads to adjacent washes; accidental spills of hydrocarbon fuels and greases (including HTF fluid); and accidental releases from the LTU and evaporation ponds (refer to the above discussion under Item 6, Groundwater Quality, for additional description of the LTU and evaporation pond facilities). Potential erosion and sedimentation impacts during Project operation would be addressed through applicable elements of previously described Condition of Certification SOIL & WATER-1.

Potential impacts related to accidental spills and releases would be managed through: (1) appropriate Project design features (e.g., providing two feet of freeboard in evaporation ponds to minimize potential overtopping during larger storm events); (2) hazardous materials management requirements (refer to the Hazardous Materials Management section of this Decision); and (3) ~~conformance with applicable NPDES/SWPPP requirements; and~~ (4) implementation of pertinent elements of previously described Condition of Certification SOIL & WATER-6.

Page 26, Findings of Fact No. 2:

Implementation of Reconfigured Alternatives #2 or #3, and adherence to the procedures in Conditions of Certification SOIL & WATER-1 (including the construction DESCOP) and SOIL & WATER-8 through SOIL & WATER-12, ~~as well as related NPDES/SWPPP requirements,~~ will avoid significant soil erosion and subsequent sedimentation during construction and operation, conserve soil resources, maintain water quality, and prevent accelerated soil loss.

Page 42, SOIL&WATER-9:

A set of figures shall be provided at a scale of no less than 1 inch = 200 feet which show the extent and depths of flows entering the North, South and West channels for the 100-year event. A figure at the same scale shall also be provided for depth, velocity and the relative change in these parameters at and downstream of the four end diffuser structures for the 10-, 25- and 100-year events. Digital input and output files associated with the FLO-2D analysis must be included with all submittals. The results of this analysis shall be used for design of the 30% project grading and drainage plans.

Page 51, SOIL&WATER-14, Section 1.b.:

The use of an appropriately constructed groundwater model 1.) for the eastern portion of the Chuckwalla Valley Groundwater Basin that describes the affect from Project pumping on the outflow of groundwater to the Palo Verde Valley, and 2.) an appropriately constructed groundwater model of the Palo Verde Valley, inclusive of the mesa and floodplain. The models shall be coupled as appropriate to determine the effect from Project pumping on the surface water recharge in the Palo Verde Valley. Each models shall be constructed in consideration of the following:

Cultural Resources

Page 1. Summary, third paragraph:

When a cultural resource is determined to be significant, it is eligible for inclusion in the California Register of Historical Resources (CRHR). (Pub. Res. Code, § 5024.1; Cal. Code Regs., tit. 14, § 4850 et seq.) An archaeological resource that does not qualify as an

historical resource may be considered a “unique” archaeological resource under California Environmental Quality (CEQA) (*see* Pub. Res. Code, § 21083.2.)

Page 36. CUL-3, first paragraph:

Prior to the start of ground disturbance (includes “preconstruction site mobilization,” “construction-related ground disturbance,” and “construction-related grading, boring, and trenching,” as defined in the General Conditions for this project), the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternate CRSs, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities in accordance with the Conditions of Certification (Conditions).

Explanation: Correction of terminology to correspond to the most recent version of the definitions in the General Conditions.

Page 47. CUL-9, first paragraph, first sentence:

The project owner shall grant authority to halt ground disturbance to the CRS, alternate CRS, PPA, PHA, ~~PTNCL Geoarchaeologist (PG), if retained, PE,~~ and the CRMs in the event of a discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

Explanation: The original text included personnel—a Project Geoarchaeologist (PG) and a Project Ethnographer (PE)—who in a later iteration were deleted from the required staffing in **CUL-3**. These references should have been deleted before. For consistency, staff recommends that reference to them be deleted here.

Page 48. CUL-9, Verification, clause 1:

At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, PPA, PHA, ~~PG,~~ and CRMs have the authority to halt ground disturbance in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.

Explanation: The original text included personnel—a Project Geoarchaeologist (PG) and a Project Ethnographer (PE)—who in a later iteration were deleted from the required staffing in **CUL-3**. These references should have been deleted before. For consistency, staff recommends that reference to them be deleted here.

Page 49. CUL-11, second paragraph:

The plan shall also specify in detail the location recordation equipment and methods used and describe any post-processing of the data. If allowed by the BLM, prior to the start of ground disturbance within 30 meters of the site boundaries of each of these sites, the

project owner shall ensure that the CRS, ~~the PSSA~~, the PPA, and/or archaeological team members implement the plan, which, for sites where CARIDAP does not apply, shall include, but is not limited to the following tasks:

Explanation: The original text included personnel who in a later iteration were deleted from the required staffing in **CUL-3**. These references should have been deleted before. For consistency, staff recommends that reference to them be deleted here.

Page 53. CUL-13, first paragraph:

Prior to the start of ground disturbance, the project owner shall ensure that a recovery plan is included in the CRMMP for upgrading the recordation of ~~34~~ historic-period refuse scatter sites located on the proposed plant site. For Reconfigured Alternative # 3, these consist of sites ~~(SMP-H-1003, SMP-H-1004, SMPH--1006, SMP-H-1008, SMP-H-1009, SMP-H-1010, SMP-H-1011, SMP-H-1012, SMP-H-1013, SMP-H-1020, SMP-H1021, SMP-H--1022, SMP-H-1023, SMP-H-2002, SMP-H-2003, SMP-H-2004, SMPH--2006, SMP-H-2007, SMP-H-2008, SMP-H-2010, SMP-H-2011/12, SMP-H-2017, SMP-H-2019, SMP-H-2021; JR-101, JR-102, JR-104, JR-107, JR-109, JR-110; TC-008, TC--009, TC--020, and TC-032, all of which are located on the proposed plant site, is included in the CRMMP.~~ For Reconfigured Alternative #2, the sites requiring upgraded recordation consist of the same sites as Reconfigured Alternative #3 plus site JR-107. These site lists may be revised only with the agreement of the CRS and the CPM.

Explanation: Last-minute, post-RSA revisions to this condition intended to reflect both Reconfigured Alternatives are not accurately reflected.

Page 54. CUL-13, number 4:

The project owner shall ensure that the original site map shall be updated to include at minimum: landform features such as small drainages, any man-made features, the limits of any artifact concentrations and features ~~(previously known and newly found in the metal detector survey)~~, using location recordation equipment that has the latest technology with sub-meter accuracy (such as UTM 11 North or California Teale Albers).

Explanation: This activity, which was formerly a numbered required activity, was deleted.

Page 54. CUL-13, number 6, part b:

The letter report shall be a concise document ~~the~~ that provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms.

Page 55. CUL-13, Verification, clause 1:

At least 45 days prior to ground disturbance, the project owner shall notify the CPM that mapping and upgraded in-field artifact analysis has ensued on ~~six~~the historic-period refuse scatter sites.

Explanation: This condition was copied from a previous project, and staff failed to delete this number, which is inaccurate. Staff recommends just replacing the incorrect number with “the,” since the specific number is not relevant.

Page 55. CUL-14, first paragraph:

Prior to the start of ground disturbance, the project owner shall ensure that a data recovery plan is ~~developed for historic-period archaeological sites with features~~ is included in the CRMMP for evaluation and data recovery from historic-period archaeological sites with features. For Reconfigured Alternative #3, these sites consist of sites SMP-H-1005, SMP-H-1007, SMP-H-2016). For Reconfigured Alternative #2, these sites ~~are~~consist of the same sites as Reconfigured Alternative #3, plus site JR-108. ~~This~~These site lists may be revised only with the agreement of the CRS and the CPM. The plan shall specify in detail the location recordation equipment and methods to be used and describe any anticipated post-processing of the data. The project owner shall then ensure that the CRS, the PHA, and/or archaeological team members implement the plan, if allowed by the BLM, which shall include, but is not limited to the following tasks:

Explanation: Last-minute, post-RSA revisions to this condition intended to reflect both Reconfigured Alternatives are not accurately reflected.

Page 57. CUL-14, number 8, part b:

The letter report shall be a concise document ~~the~~that provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms.

Page 57. CUL-14, number 8, part c:

The letter report shall make a recommendation on whether each site is a contributor to the ~~DTTCL~~DTCCCL.

Page 57. CUL-14, number 10:

The project owner shall ensure that the PHA analyzes all recovered data and writes or supervises the writing of a comprehensive final report. This report shall be included in the CRR (**CUL-6**). Relevant portions of the information gathered shall be included in the possible NRHP nomination for the DTCCCL (funded by **CUL-2**).

Land Use

Page 17, delete LAND-2.

Explanation: Staff agreed with the applicant's comment that the development impact fee is not required because the project is located on BLM land.

Traffic and Transportation

Page 1, B. TRAFFIC AND TRANSPORTATION:

The record contains an analysis of: ~~(1) potential problems related to construction and operational traffic; and (2) the possible effect of project operations on local airport flight traffic.~~

Page 1, SUMMARY AND DISCUSSION OF THE EVIDENCE, Subsection: 1. Project Site and Vicinity:

The Corn Springs Road extension would be about 1,350 feet long and would run east from just north of the I-10 Corn Springs Road entrance/exit ramps to the project site entrance. ~~From the existing dead end, Corn Springs Road would be extended about 1,350 feet to the north to connect with a new access road running east into the project site.~~ (Ex. 300, p. C.10-2.)

Page 2, last paragraph:

There is no rail or bus service near the project and bicycle and pedestrian facilities are "minimal-to-none". There are no ~~nearby~~ airports sufficiently close to the project (within 20,000 feet or less) to require FAA notification. (Ex. 300, p. C.10-4.)

Page 9, Subsection: 3. Operation Impacts and Mitigation:

Access to the site for emergency services vehicles is adequate given that an emergency vehicle could reach the project property directly from I-10 at Corn Springs Road. The proposed project operation also would also not alter rail transportation. No rail tracks exist on or near the project site.

Page 10, first paragraph:

The evidence establishes that the major glint or glare issue for motorists would be from specular reflections from the mirrors in the mornings and evenings during the summer when the sun rises and sets to the north. During these times, there may be glare visible to motorists driving west (during the morning) or east (during the evening) from the south

end of the trough collectors or when the collectors are moving off-axis to or forwards
the stow position.

DATED: November 29, 2010

Respectfully submitted,

/s/ Lisa M. DeCarlo

LISA M. DECARLO
Senior Staff Counsel
California Energy Commission
1516 9th Street
Sacramento, CA 95817
Ph: (916) 654-5195
e-mail: ldecarlo@energy.state.ca.us

AIR QUALITY

Supplemental Testimony of William Walters, P.E.

The applicant has proposed to include a gasoline tank in an onsite refueling facility. Originally, the tank was proposed to be 500 gallons and was to be permitted by the South Coast Air Quality Management District (SCAQMD). However, the applicant recently reduced the proposed tank size to 250 gallons or less, which is just under the SCAQMD threshold for permitting [District Rule 219 (m)(9)]; therefore, staff is addressing the design and operation of the gasoline tank that would otherwise have been addressed by SCAQMD and would have been included as a District Condition(s) of Certification.

The gasoline tank was originally proposed to include Phase I and Phase II vapor control to comply with District Rule 461. Phase I vapor control is the recovery of gasoline vapors from storage tanks during filling through a vapor balance or equivalent system. Phase II vapor recovery is the recovery of gasoline vapors from vehicle gasoline tanks during vehicle refueling using a vapor balance or equivalent system. Phase I and Phase II compliant equipment are required to be certified by the Air Resources Board. The reduction in tank size would change the regulatory requirements of this Rule by eliminating the requirement for Phase I vapor recovery control. Staff believes that Phase I vapor recovery should still be required as originally proposed by the applicant. Staff is proposing the addition of the following new staff condition (**AQ-SC12**) to ensure that the gasoline tank is installed and operated as proposed by the applicant.

AQ-SC12 For the aboveground gasoline storage tank, the project owner shall comply with South Coast Air Quality Management District Rule 461 and Air Resources Board Executive Orders (EOs) otherwise applicable to storage tanks larger than 250 gallons and shall:

- a. Ensure that the above ground gasoline storage tank installed is no larger than 250 gallons in storage capacity and that the tank and associated fuel dispensing unit is equipped with appropriate Phase I and Phase II ARB vapor recovery systems otherwise applicable under District Rule 461 to storage tanks larger than 250 gallons at the time of installation.
- b. Maintain onsite a list of the SCAQMD Rule 461 and ARB EO design, testing, and other requirements applicable at the time of purchase to storage tanks larger than 250 gallons, including vapor recovery system.

- c. Maintain onsite a log of all inspections, repairs, tests, and maintenance on equipment subject to the requirements specified in part (b) above. Such logs or records shall be maintained at the facility for at least two (2) years and available upon request.

Verification: No later than 30 days prior to purchasing the above ground storage tank and its components, the project owner shall provide to the CPM for approval the final tank and vapor recovery system design specifications and a list of applicable Rule 461 and EO design, testing, and other requirements, including specifications for the vapor recovery equipment. The project owner shall also provide gasoline throughput records in the Annual Compliance Report and shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.


DECLARATION OF
Testimony of William Walters, P.E.

I, **William Walters**, declare as follows:

1. I am presently employed by Aspen Environmental Group, a contractor to the California Energy Commission's Siting, Transmission and Environmental Protection Division, as a senior associate in engineering and physical sciences.
2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference herein.
3. I prepared the staff testimony on **Air Quality** for the **Palen Solar Power Project's Gasoline Tank Supplemental Staff Assessment** based on my independent analysis of the Application for Certification and supplements hereto, data from reliable documents and sources, and my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: November 29, 2010

Signed: _____


At: Agoura Hills, California



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

**APPLICATION FOR CERTIFICATION
FOR THE PALEN SOLAR POWER
PLANT PROJECT**

Docket No. 09-AFC-7

**PROOF OF SERVICE
(Revised 8/27/10)**

APPLICANT

Alice Harron
Senior Director of Project Development
*1111 Broadway, 5th Floor
Oakland, CA 94607
harron@solarmillenium.com

*Michael Cressner, Project
Development & Permitting
Solar Millennium, LLC
1111 Broadway, 5th Floor
Oakland, CA 94709
cressner@solarmillennium.com

Arrie Bachrach
AECOM Project Manager
1220 Avenida Acaso
Camarillo, CA 93012
arrie.bachrach@aecom.com

Ram Ambatipudi
Chevron Energy Solutions
150 E. Colorado Blvd., Ste. 360
Pasadena, CA 91105
rambatipudi@chevron.com

Co-COUNSEL

Scott Galati, Esq.
Marie Mills
Galati/Blek, LLP
455 Capitol Mall, Suite 350
Sacramento, CA 95814
sgalati@gb-llp.com
mmills@gb-llp.com

Co-COUNSEL

Peter Weiner, Matthew Sanders
Paul, Hastings, Janofsky &
Walker LLP
55 2nd Street, Suite 2400-3441
San Francisco, CA 94105
peterweiner@paulhastings.com
matthewsanders@paulhastings.com

INTERVENORS

California Unions for Reliable Energy
(CURE)
c/o Tanya A. Gulesserian,
Marc D. Joseph
Jason W. Holder
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard,
Suite 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com
jholder@adamsbroadwell.com

Michael E. Boyd, President
Californians for Renewable Energy
(CARE)
5439 Soquel Drive
Soquel, CA 95073-2659
michaelboyd@sbcglobal.net

Alfredo Figueroa
Californians for Renewable Energy
(CARE)
424 North Carlton
Blythe, CA 92225
lacunadeaztlan@aol.com

Basin and Range Watch
Kevin Emmerich
Laura Cunningham
P.O. Box 153
Baker, CA 92309
atomicoadranch@netzero.net

Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
lbelenky@biologicaldiversity.org
Ileene Anderson
Public Lands Desert Director
Center for Biological Diversity
PMB 447, 8033 Sunset Boulevard
Los Angeles, CA 90046
ianderson@biologicaldiversity.org

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

Holly L. Roberts, Project Manager
Bureau of Land Management
Palm Springs-South Coast
Field Office
1201 Bird Center Drive
Palm Springs, CA 92262
CAPSSolarBlythe@blm.gov

ENERGY COMMISSION

ROBERT WEISENMILLER
Commissioner and Presiding Member
rweisenm@energy.state.ca.us

KAREN DOUGLAS
Chairman and Associate Member
kldougla@energy.state.ca.us

Raoul Renaud
Hearing Officer.
rrenaud@energy.state.ca.us

Alan Solomon
Siting Project Manager.
asolomon@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
ldecarlo@energy.state.ca.us

Jennifer Jennings
Public Adviser's Office
e-mail service preferred
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Rhea Moyer, declare that on **November 29, 2010**, I served and filed copies of the attached, **Energy Commission Staff's Comments on the Presiding Member's Proposed Decision for the Palen Solar Power Project and Supplemental Air Quality Testimony** dated **November 29, 2010**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [\[http://www.energy.ca.gov/sitingcases/solar_millennium_palen\]](http://www.energy.ca.gov/sitingcases/solar_millennium_palen)

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

- sent electronically to all email addresses on the Proof of Service list;
- by personal delivery;
- by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

- sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (*preferred method*);

OR

- depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 09-AFC-7
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

/s/ Rhea Moyer
Rhea Moyer