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## **STATE OF CALIFORNIA**

## **Energy Resources Conservation and Development Commission**

In the Matter of:

APPLICATION FOR CERTIFICATION ) FOR THE PALEN SOLAR ELECTRIC ) GENERATING SYSTEM ) DOCKET NO. 09-AFC-7C

## INTERVENOR BASIN AND RANGE WATCH OPENING BRIEF FOR THE REOPENED HEARINGS

August 15th, 2014

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## **Opening Brief from Basin and Range Watch**

We would like to address the following unresolved issues for the Palen Solar Power Project in this brief:

- 1. Glint and Glare
- 2. Biological Resources
- 3. Cultural Resources
- 4. Overrides and Alternatives
- 5. Thermal Storage

**Introduction:** Basin and Range Watch participated in the evidentiary hearing for the Palen Solar Project on July 29<sup>th</sup> and 30<sup>th</sup>, 2014. We felt that the hearing was an overall replay of the first hearing and that none of the issues were resolved. We also felt that the schedule and procedure of the hearing was very inconsistent and confusing. In some cases, witnesses were no longer available for cross-examination because the schedule was changed so much. We felt that the hearing was pushed through to meet the schedule of the petitioner and because of that, many of the issues remain unresolved.

**Glint and Glare:** The Glint and Glare problem for traffic and transportation seemed to end in a workshop, but the following issues still remain unresolved:

Clifford Ho of Sandia National Laboratory stated that he believes that glare can be reduced in the future with modifications by developing algorithms for heliostats that are in the standby mode or position, when they're not shining on the receiver. Yet there is still no developed plan.

The petitioner requested that Direct Solar Radiation from a Heliostat (DSRH) be defined as a health and safety issue, while staff would like a more general monitoring plan for glare events. Pilots are still complaining about the glare events. They are calling it the brightest light they have seen. We would also like a more general monitoring plan for glint and glare that includes cars and hikers.

So far no real mitigation has been proposed other than a monitoring plan from Trans-7 which identifies heliostat movement in operation and how it may impact pilots and motorists , but offers no mitigation. What is there is an injury or a fatality?

Neither staff nor the petitioner could comment about how any plans to monitor and mitigate glint and glare could conflict or contradict any avian conservation plan designed to configure heliostats.

**Biological Resources:** Nothing has changed regarding the current impacts to avian fauna. All parties are in agreement that the project will exterminate and injure birds.

So far, there have been no effective or meaningful mitigations proposed that will prevent, offset or devalue all of the birds that will potentially be killed by the Palen Solar Power Project.

Focused surveys for the Ivanpah Solar Electric Generating System have only taken place since February and there is no data for a solar power tower this large from the Fall.

The Technical Advisory Committee for the ISEGS Project has pointed out that the USGS still needs to survey the project in the Fall as referenced in TN # 202760. It is irresponsible to approve this project before all of the relevant data can be reviewed.

Dr. Shawn Smallwood has made some predictions for both the ISEGS and proposed Palen Project. These predictions raise concern that the agencies involved have not conducted enough surveys.

As referenced in TN # 202499, Smallwood predicts that if the entire project was searched periodically for fatalities at a 9-day interval, then 4,375 bird fatalities would be found per year.

He believes that Palen could exceed the fatality rates in the Altamont Pass Wind Resource Area, even though the power produced by the Palen Project would be less than the 580 MW capacity of wind turbines in the Altamont Pass.

He also suggests that the numbers of avian fatalities coming from Ivanpah reports could be up to 20,000 bird mortalities per year.

He suggests that the petitioner's determent mitigation ideas could create their own problems and cause their own avian mortality.

These numbers are alarming. Because the migration of avian fauna in the region is poorly understood and the full impacts of power towers have not been completely compiled, it seems frivolous to approve the Palen Project using adaptive management and deferred mitigation. The Palen Project could reduce numbers of important species, some rare, some federally and state protected. We will stick to our original request that the Palen Solar Project should not even be considered until 3 full years of avian data can be compiled from the Ivanpah Project.

**Insects**: TN # 202492 expert witness for CBD Gordon Pratt, an entomologist, said the intense glowing light of the Palen solar power tower could attract large numbers of insects to their deaths like a huge bug-zapper. The insect diversity should be studied and monitored to see if any species were lost in the area over time. Malaise traps could be set up on the edges of the solar field to trap insects and monitor diversity over time. Entomologists visiting the Palen Dunes adjacent to the project site in the past found over 130 species of beetles on only four visits.

**Overrides:** During the session for overrides, the petitioner made a long testimony which highlighted the advantages of the new molten salt, thermal storage plan for Tower Two. Much of the testimony covered engineering facts. However, the schedule of the hearing was so disorganized and drawn out, that Center for Biological Diversity's engineering expert witness, Bill Powers was not available to respond to their testimony. In short, this was an incomplete part of the hearing that was never resolved.

Any overrides will result in the tragic kills of avian fauna, insects possibly cause accidents with aircraft, and destroy the cultural integrity of the area. An override of any kind would be a disaster.

**Alternatives**: The Palen Solar Electric Generating System project is down to one 750-foot-high power tower to be built in Phase 1 but BrightSource still wants a license for two towers – build one now and to build one with storage in the future. BrightSource's design will only add 15 minutes of operation after sunset. But they want to start up around noon and then store heat to be able to follow peak electricity usage in the late afternoon. This is all theoretical, their first proposed tower would not have storage but would have natural gas boilers to fire up when needed. The second tower would not have natural gas back-up. BrightSource said it was not economically feasible to build storage on the first phase tower.

The plan is inconsistent with the petition to amend the original application – which was for two towers with no storage. The petitioner just wants the license for the new configuration. Because the plan is so different, we believe that staff has the responsibility to review it as a new project. We would like to see a new Supplemental Staff Assessment (SSA) written with a full analysis of this new configuration. It should be considered an Alternative to the original plan. The SSA should at least have a 60 day public review period.

**Cultural Resources:** The CEC has broken the hearing up into so many categories when the people representing the Colorado River Tribes have a basic, holistic view of the site. If the project is built, there will be no way to mitigate the impacts to cultural resources, which include all of the resources being discussed.

Placing artifacts in a museum, giving money to them, or enhancing other sites away from the area will not do any good and has been viewed as insulting by those who spoke.

Several people representing the Tribes spoke opposing the project. As a public agency, the CEC has a responsibility to the majority of the local people. Their overwhelming opposition should send a strong message to the CEC – The Palen Solar Power Project is not welcome in this location.

We have suggested the only solution – find an alternative off site, use distributed generation and even use a different technology. Since we do not wish to oppose all solar energy, we would like to see solar built in appropriate locations utilizing the built environment using a more environmentally friendly technology.

If the CEC can't justify considering one of these alternatives, they can certainly justify a No Project Alternative based on the fact that the Palen Solar project is an inappropriate way to use solar energy. A No Project Alternative could be selected and staff could offer alternative suggestions and locations for development and meeting California's Renewable Portfolio Standard. Submitted August 15th, 2014

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