

Energy Commission Docket Unit  
Docket No. 08-AFC-9  
1516 Ninth Street, MS-04  
Sacramento CA 95814

**DOCKET**

**08-AFC-9**

DATE JUL 18 2011

RECD. JUL 18 2011

July 18, 2011

**REQUEST TO SUBMITT PUBLIC COMMENT**  
Palmdale Hybrid Power Project Hearing  
Docket No. 08-AFC-9

Name: Jack Ehernberger  
Representing: Self, only!

**Remarks Regarding Air Quality and Visual Impacts**

In spite of voluminous documentation for review, circa 2008, the PHPP impacts on air quality and visual impacts of atmospheric transparency are not clearly exhibited for public review and acceptance. This deficiency is perceived both from the standpoint of the official formal documentation, as well as the press releases and public media coverage. As a result of at least minimal public citizen effort to discern the potential impacts of PHPP some items of concern are listed below.

1. **The locations** of meteorological data resources used in the limited materials I have examined have been described as using surface wind from Victorville (an online source) and from the Palmdale Plant 42 runway in another (2008 hardcopy). Upper air wind and temperature data used is described (2008, 5.2 - 53) as archived from the Mercury / Desert Rock NV observation site.
2. **Assessment period risks.** If the operator of the PHPP is not willing to shut down for several hours on from 1 to 10% of the days to alleviate impacts during unfavorable meteorological conditions, the required air quality assessment data period is far too short. A prudent meteorological assessment calendar period for the parties funding and those operating vital facilities should extend well beyond the investment amortization period. Likewise the communities impacted by the operation should be equally concerned with longer-term meteorological behavior risks. The climatological assessment period should at least identify worst cases for time periods of 30 years or more. If not determined directly with hourly - daily observations coupled with air quality modeling other statistical projection methodologies should be employed. Note, if this were water instead of air, a 100-year flood plane would likely be used.
3. **Low altitude wind structure.** Assessment error risks for the Antelope Valley low altitude air stagnation situations are very real. Factors in these risks do include the short assessment period and the assessment data source locations. Equally important is the fidelity of the small-

scale wind and temperature structure in the lower altitudes. I would agree to the use of the NV winds for general wind pattern climatology at altitudes above 12,000 or 15,000 feet. However, winds measured at the NV site for altitudes below 6000 feet will be significantly different from those in the Antelope Valley, from the standpoint of climatology as well as on a daily basis. Thus the coupling of Palmdale surface winds with upper air data from NV is not likely to produce adequate results.

4. **Low altitude temperature and humidity structure.** Topographic differences influence both atmospheric wind and thermodynamic structure at low altitudes. Prevailing Antelope Valley air characteristics are strongly influenced by flow through three mountain passes. However during air stagnation periods, the atmospheric structure is largely influence by differences in nocturnal and solar radiation with location on the floor of the valley as well as on the adjoining mountain slopes. These radiation-cooling patterns result in significant temperature and humidity profile structure variations at low altitudes. The resolution of archived upper air data is not sufficient to characterize this meteorological influence at Palmdale for PHPP worst-case assessment. Moreover, in the PHPP review materials we do not see if the modeling tools (AERMOD) adequately compensate for this meteorological observation deficiency. Thus, the public has another source of "worst case" assessment accuracy risk.

Approval authority within the Energy Commission and AQMD permitting processes does not seem to require as much detail for impact assessments as are necessary for reasonable public understanding, long term civic planning or for commercial viability with respect to meteorological influences on large, long-term emissions sources. Since it is not clear that any advocate, objecting party or endorsing organization has accomplished adequate assessment of meteorological influences on the PHPP impacts it is recommended that such deficiencies be reflected in the forthcoming board action.

Respectfully,

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