DOCKETED

Docket Number:	15-AFC-01
Project Title:	Puente Power Project
TN #:	220288
Document Title:	County of Ventura, Department of Airports Comments on Puente Power Project
Description:	N/A
Filer:	System
Organization:	County of Ventura, Department of Airports/Todd McNamee
Submitter Role:	Public Agency
Submission Date:	7/20/2017 4:43:25 PM
Docketed Date:	7/20/2017

Comment Received From: Todd McNamee
Submitted On: 7/20/2017
Docket Number: 15-AFC-01

Todd McNamee Comments - Department of Airports

Additional submitted attachment is included below.

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July 20, 2017

California Energy Resources Conservation and Development Commission

Re: Public Comment on Puente Power Project Docket No. 15-AFC-01

I submit the following comments based on my understanding of the Traffic and Transportation Alternatives section of the Supplemental Testimony prepared by CEC staff and the Closing Supplemental Testimony of James Caldwell on behalf of the City of Oxnard.

Proposed Power Plant Sites

The Supplemental Testimony continues to rely on flight tracks from the County's Airport Land Use Plan to conclude that low-altitude overflight of the Del Norte/Fifth St. site might occur from aircraft arriving at or departing from Camarillo Airport. As I have previously testified, the flight tracks contained in the land use plan do not necessarily reflect actual operating behavior of aircraft near the Camarillo Airport. The Del Norte/Fifth St. site is roughly 1.5 miles from the western end of the Camarillo runway, its location directly southwest of the airport. Upon further consultation with Camarillo Air Traffic Control Tower staff, I have been informed of the type of aircraft operations that may overfly this alternative site including fixed wing and helicopter operations.

Fixed wing operations include departures from runway 26 with left turns out to the coast, left turns on instrument flight rules departures, and overflight when the traffic pattern is extended due to congestion. Overflight will also occur from aircraft departing Oxnard airport under visual flight rules arriving at Camarillo airport, and when aircraft are flying instrument landing approach procedures into Oxnard airport. Helicopter operations will overfly the site when flying special visual flight rules to and from Camarillo airport known as the "5th Street Route." Altitudes for these varying operations will range from 500 feet above ground level (AGL) to 2,500 feet AGL.

Please be reminded of my significant concern of overflight of the Puente site by aircraft departing and arriving at Oxnard airport at low altitudes. In the two-month period depicted in the CEC's PSA, 85 aircraft overflew the Puente site, which on average equates to 510 aircraft overflights per year. Of the Puente overflights documented in the PSA, 14 were between 2,001-3,000 feet, 60 were between 1,001-2,000 feet, and 11 were below 1,000 feet. These flights can include light and ultra-light aircraft, which are more susceptible to thermal plume impacts. The Navy has

also expressed concern over the Ormond Beach alternative site. The Department of Airports (Department) believes that locating a power plant at any of these sites presents a hazard to aviation that does not exist today.

For the above reasons, the Department believes that Puente and the alternative sites all present an impact to aviation safety, and should not be approved. Additionally, the Department continues to find proposed mitigation measure TRANS-7 inadequate to mitigate potential thermal plume impacts to aircraft. To the extent that the CEC is considering the effectiveness of this mitigation measure, that analysis should be performed at all potential alternative locations. TRANS-7 should be required at any of the proposed alternative sites.

The Need for Mitigating Technology

If the CEC is inclined to approve a power plant at any of these proposed sites, it is imperative that it require the Applicant to use technology that would minimize the potential hazard to aircraft. The CEC staff's Supplemental Testimony indicates exhaust plumes of "critical velocity" reach higher altitudes with the proposed Puente turbine compared to alternative turbine technologies. CEC staff's testimony states that a critical velocity plume from Puente could reach elevations up to 2,375 feet above ground level. Importantly, critical velocity plumes from alternative turbine technologies would be much lower. Critical plumes from "LMS100" turbines would reach elevations between 656 and 1,333 feet depending on the number and location of operating stacks. Critical velocity plumes from "LM6000" turbines would be even lower between 512 and 1,170 feet in elevation. Thus, the proposed Puente technology could produce critical velocity plumes that are roughly between two and four times higher than potential alternatives.

Additionally, the CEC's analysis shows that reducing the number of LMS100 or LM6000 turbines in use can significantly reduce the height exhaust plume. The Department therefore recommends not approving the Puente turbine and only approving an alternative that use the least number of LMS100 or LM6000 turbines as possible.

Finally, the Caldwell testimony indicates that both LMS100 and LM6000 turbines can be equipped with technology that significantly reduces the number of times that those turbines would combust natural gas and create exhaust plumes. It is the Department's understanding that the proposed Puente turbine does not have similar technology and would be required to combust more frequently.

After evaluating different turbine technologies, it is the opinion of the Department of Airports that the CEC should only approve smaller turbine technology that minimizes the height and frequency of potential exhaust plumes and the resulting hazard that a plume might pose to aircraft at the nearby Ventura County airports.

If you have any questions regarding this matter, please call me at 805-388-4200.

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