

## DOCKETED

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## **Mission Rock Energy Center Noise and Air Quality Issues**

*Additional submitted attachment is included below.*

9/6/2016

To: California Energy Commission

Subject: Mission Rock Energy Center Noise and Air Quality Issues

## Overview

Calpine Corporation, through a wholly owned subsidiary limited liability corporation, Mission Rock Energy Center, LLC (MREC), has submitted an Application for Certification for a natural gas-fired “peaker” power plant to the California Energy Commission (CEC). The proposed MREC facility would be located immediately upwind of the community of Santa Paula, California. MREC has stated that anticipated use is about 300 hours of operation per year. However, the Application is for 2,496 hours of operation annually, and this must be the criteria by which the CEC evaluates it. There are so many problems with this application, that it would take a small army, with nothing else to do, years to address each in appropriate detail. It is very telling that in all of the comments posted to the CEC, none have been positive. The only positive comments came at the Santa Paula scoping meeting, and those were from union representatives keen for the relatively small number of temporary jobs the construction would bring. Residents of the community ranging from young to old have been unanimously against the project. Of course, we don’t get to vote on this project. The decision is made by the California Energy Commission. However, the CEC must evaluate all the input from interested parties on both sides of the issue. If there are serious concerns for the environment, the health and well-being of the residents, the economics, etc., these can be mitigated in various ways. I’m hopeful (although there’s no evidence hoping ever made a difference) that the avenues of mitigation avoid payment (e.g. emission reduction credits, or cash payments to schools and other facilities) in exchange for tolerance of the negative effects. The bottom line is that the huge profit potential of this operation allows MREC to make relatively small payments, while the community as a whole is left with the adverse effects of this power plant until at least 2030.

This letter will address only 2 of the issues with the Application, either of which should totally terminate consideration of the project by the CEC, without any possibility of mitigation. These are Air Quality and Noise. MREC has minimized the effect of both in the less than extensive treatment provided in the Application. A careful evaluation of these sections in the Application illuminates glaring weaknesses in the methodology, analysis, and conclusions.

## **Air Quality**

It’s inconceivable that a gas-fired “peaker” power plant would even be proposed on the eve of the governor’s approval of SB-32. The California Energy Commission must be aware that SB-32 mandates the reduction of emissions of greenhouse gasses to at least 1990 levels by 2020, and

to 40% below that level by 2030. The Act also states (in Section 1) that *“Continuing to reduce greenhouse gas emissions is critical for the protection of all areas of the state, but especially for the state’s most disadvantaged communities...”* The siting of the MREC facility immediately upwind from agricultural community of Santa Paula would result in the most profound and deleterious effects manifested directly on that disadvantaged community.

Quoting Section 5.1 of the MREC Application, *“Installation and operation of the MREC will be considered a major source under the VCAPCD 26.1 rule for NOx and will trigger the offset requirements under VCAPCD Rule 26.2 for NOx and ROC.* Mitigation will be through surrender of “emission reduction credits”. The proposed location of the facility is in an area subject to air stagnation due to frequent inversions. Thus, the pollutants will not be dispersed. This in an area that already exceeds the federal standards for ozone, and state standards for both ozone and particulate matter. **Certainly the people, plants, and animals breathing the toxic nitrogen oxides, reactive organic compounds, in addition to the particulate matter, sulfur oxides, and carbon monoxide (for which no major source thresholds are stated in the rules) will be ecstatic to hear that their health and well-being has been traded for credits.**

## Noise

This is one of the most egregious understatements in the Application document. The entire analysis is flawed by their assumptions. Where the “estimated noise levels” exceed county guidelines, they propose several “potential noise control measures,” but fail to document the effectiveness of any. So we are left to trust that they’ll take care of it. Under the Tonal Noise heading, the document states that *“no significant tones are anticipated.”* The Application goes on to concede that *“combustion turbine inlets, transformers, pump motors, and cooling tower fan gearboxes, have been known to sometimes produce significant tones.”* Have you ever stood on an airport ramp and heard the tones from the whine of jet engines? How about 5 jet engines? Oh yes: not significant.

I mentioned that the noise analysis was flawed. Here is the basis of the *“preliminary noise model”* for the MREC facility quoted from the MREC Application:

*The sound propagation factors used in the model have been adopted from ISO 9613-2 Acoustics - Sound Attenuation during Propagation Outdoors (ISO, 1996). The model divides the proposed facility into a list of individual noise sources representing each piece of equipment that produces a significant amount of noise. Using these sound power levels as a basis, **the model calculates the sound pressure level that would occur at each receptor from each source after losses from distance, air absorption, blockages, etc. are considered.** (My emphasis)*

**This model doesn’t take into consideration that the proposed MREC facility is located in a narrow valley, and that the sound propagation characteristics are completely different than open space attenuation. In fact, various studies have clearly demonstrated that sound**

**pressure levels in narrow valleys can be increased by more than 30 dBA over that predicted by ISO 9613-2:1996** (Van Renterghem *et al.*: Sound propagation in valley-slope configurations). Conveniently, the MREC model also omits the effect of wind and atmospheric conditions. Santa Paula's location downwind of the proposed site location, as well as stratus cloud layers will amplify the effect of the valley walls. Thus the noise generated by the 5 LM6000 Combustion Turbine Generators and Fuel Gas Compressors (112dBA each) will completely disrupt the serenity of our peaceful valley. I can make this assertion without reservation; I can clearly hear individual trucks on the freeway from my porch close to 7000' away (truck noise = approx. 50 dBA at 100'). The roar of those 5 turbines and associated equipment will change this valley irreparably. Please do not accept MREC's flawed analysis of the noise levels. There is no known technology that can successfully mitigate the effects of the noise produced by the proposed MREC facility in this narrow valley.

Looking at Section 5.7.3.1 *Significance Criteria*, we find the following:

*Following the CEQA guidelines (CCR, Title 14, Appendix G, Section XI), the MREC would cause a significant impact if it would result in the following:*

- *Exposure of people to noise levels in excess of standards established in the local General Plan or noise ordinance*
- *Exposure of people to excessive ground-borne noise levels or vibration*
- *Substantial permanent increase in ambient noise levels in the project vicinity*
- *Substantial temporary or periodic increase in ambient noise levels in the project vicinity*

If a correct model were used to evaluate the noise levels generated by this project, the conclusions would clearly point to a significant impact from the first, second and fourth points. Of course, the Application, using the flawed model, states that at position M2, the plant may well exceed the project noise limits. Add 30 dBA from the effect of the narrow valley, and the proposed noise control methods will be completely ineffective throughout the community of Santa Paula.

In addition, the Applicant's measurements and model predict only the A-weighted sound pressure levels. This represents the sound pressure level to which the human ear is most sensitive. Effectively, A-weighted measurements filter the very low and very high frequency elements of the sound. While this is the standard for determining human reactions, it does not reflect the consequences to the rest of the inhabitant species of the proposed site environment. Clearly, the range of spectral sensitivity of different species to sound has not even been considered. The Application (Section 5.2.2.3) states:

*Noise impacts to wildlife are difficult to measure; however, results of several studies summarized by Golden, et al. (1980) indicate no impacts from aircraft noise at 75 decibel A-weighted scale (dBA) for several wildlife species.*

Is there any question that 112 dBA for hours on end is in no way comparable to an airplane flying over at 75 dBA for 10 seconds? Of course, as one would expect, the Application

concludes: ***“Therefore, any impacts from noise are expected to be less-than-significant.”***

Remember that the decibel scale is logarithmic. An increase from 70 dBA to 110 dBA is a 16X increase in the loudness and a 10,000X increase in sound intensity (power). Less-than-significant? I think not!! How their “experts” can make a claim like this is way beyond the pale of comprehension.

I hope the CEC has real scientists evaluating the MREC Application. I am not comforted by what I’ve read in the Application. One might think that Calpines hasn’t put their best effort into an exhaustive evaluation of the effects of the noise from this facility on either the residents or the riparian and terrestrial fauna of the region. The “biological survey area” is a bad joke:

*Habitat and plant community assessments were conducted within a 1-mile radius of the MREC and within 1,000 feet of the proposed generator tie-line tower footings and proposed pipeline routes where access was permitted. In this section, these areas are referred to collectively as the MREC survey area. Plant community and wildlife habitat assessments were conducted within the survey area to determine if sensitive habitats occur within or near the MREC site, generator tie-line towers, or pipeline routes.*

The limit of the sample area to a 1-mile **radius** from the proposed project is ludicrous. Essentially, this amounts to 1000’ or less from the outside border of the facility. The effects of both noise and airborne pollution from this project will extend many miles in all directions. Isn’t trusting the applicant to perform the environmental impact study another example of the fox guarding the henhouse?

## **Conclusions**

Conclusions drawn by the Application support minimal impact or no impact. According to MREC, the minimal impacts are easily mitigated by the purchase of “emission reduction credits”, direct cash payments, and various and sundry mitigation strategies of unspecified (unknown?) effectiveness. Due to the proposed facility location in a narrow valley, it is highly unlikely that any noise mitigation strategy will be successful. If the applicant were serious about providing meaningful scientific data in the Application, a study of noise in the actual location would have been presented, rather than the included background noise study, with a theoretical treatment of noise dissipation in open space.

The construction of a natural gas-fired power plant with a completion date just prior to the SB-32 mandated reduction of emissions of greenhouse gasses to at least 1990 levels (by 2020) flies in the face of reason.

I’m hopeful the California Energy Commission will prove that it truly acts as a watchdog for public interest, rather than a rubber stamp for profit driven, environmentally unfriendly energy projects. I urge the Commission to reject the Application for the Mission Rock Energy Center.