

<b>DOCKET</b> <b>06-AFC-6</b>
<b>DATE</b> JAN 0 3 2008
<b>RECD.</b> JAN 0 9 2008

**From:** "Shin, Harry K." <shin@slac.stanford.edu>  
**To:** <bpfanner@energy.state.ca.us>  
**CC:** <john.pfeifer@aopa.org>, "Dunn, Bill" <Bill.Dunn@aopa.org>  
**Date:** 1/3/2008 11:40 AM  
**Subject:** Proposed Eastshore Energy Center, Hayward, CA - (Docket 06-AFC-6)

Dear Mr. Pfanner,

On December 17, I attended a public meeting at the Hayward City Hall and voiced my concern about the proposed Eastshore Energy Center from my perspective as an aircraft owner/pilot and mechanical engineer. I wanted to write this follow-up letter because we weren't given much time to speak at the public session.

I have been a licensed pilot for 34 years and own a Bellanca Citabria aircraft that is based at Hayward Executive Airport (HWD). In addition, I am a registered Professional Engineer (Mechanical, #M19488) in California and work at the Stanford Linear Accelerator Center.

The proposed Eastshore Energy Center facility is located in a very poorly considered site. Given the facility rating of 115.5 megawatts, I estimate that some 10-15% of that energy will be released as waste heat because of the engine and generator in-efficiencies. So, even with a conservative estimate, some 10 megawatts of heat energy will be released from the facility.

This 10 megawatts of heat energy will create an invisible thermal plume under the downwind leg of runway 28L/10R (28 Left and 10 Right is the same runway; the numbers correspond to the magnetic compass heading during runway operations...). Also, somewhat misleading is the suggested traffic pattern shown on the HWD noise abatement diagrams. Although that diagram shows the pattern to be flown quite close to the runway, in actual practice it is quite common for the traffic pattern to become enlarged as pilots attempt to maintain their spacing.

The pattern altitude for 28L/10R is only 650 ft MSL (relative to Mean Sea Level) and this equates to an altitude, above the ground, of 600 ft. Contrast this extremely low pattern altitude with the suggested pattern altitude of 850 ft MSL for the other HWD runway, 28R/10L, and you can start to get an idea of the problem. This extremely low pattern altitude of 650 ft is necessary to maintain clearance with Oakland Airport's Class C airspace; I have never seen another pattern flown this low for other airports.

The extremely low pattern altitude, combined with the invisible 10 megawatt thermal plume, will result in severe turbulence for aircraft just as they are turning north for their pattern's base leg. Also, the majority of training operations at HWD are flown on runway 28L/10R for noise abatement considerations, so there are many student pilots using that runway.

According to the Federal Aviation Regulations Part 91, Section 303:

"No person may operate an aircraft in aerobatic flight --

- (a) Over any congested area of a city, town, or settlement;
- (b) Over an open air assembly of persons;
- (c) Within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport;
- (d) Within 4 nautical miles of the center line of any Federal airway;
- (e) Below an altitude of 1,500 feet above the surface; or
- (f) When flight visibility is less than 3 statute miles.

For the purposes of this section, aerobatic flight means an intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight."

So, light aircraft encountering the 10 megawatt thermal plume will most certainly be experiencing un-intentional maneuvers, close to the ground, possibly with inexperienced student pilots. To me, this is a recipe for disaster; I urge you to reconsider the site of the proposed Eastshore Energy Center.

Regards,

Harry Shin  
18961 Natalie Court  
Castro Valley, CA 94546

Phone 650-926-4311