

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512



**DATE:** February 11, 2005

**TO:** Interested Parties

**FROM:** Nancy Tronaas, Compliance Project Manager

**SUBJECT: Elk Hills Power Project (99-AFC-1C)  
Public Review of Staff Analysis of Proposed Modification to  
Increase the Duration of Extended Startups**

On January 10, 2005, the California Energy Commission received a petition from Elk Hills Power, LLC, to amend the Energy Commission Decision for the Elk Hills Power Project (EHPP). EHPP is a nominal 500 MW natural gas-fired, combined-cycle power plant located at the intersection of Elk Hills and Skyline Roads, approximately 25 miles west of Bakersfield, in Kern County. The power plant was certified in December 2000, and it commenced commercial operation in July 2003.

The proposed modifications will increase the duration of extended startups (e.g., following a non-operational interval due to maintenance, etc.) from four to six hours to comply with equipment vendor specifications. Energy Commission staff reviewed the petition and assessed the impacts of this proposal on environmental quality, public health and safety, and proposes revisions to existing air quality condition of certification AQ-11. It is staff's opinion that, with the implementation of the revised condition, the project will remain in compliance with applicable laws, ordinances, regulations, and standards and that the proposed modifications will not result in a significant adverse direct or cumulative impact to the environment (Title 20, California Code of Regulations, Section 1769).

The amendment petition has been posted on the Energy Commission's webpage at [www.energy.ca.gov/sitingcases](http://www.energy.ca.gov/sitingcases). Staff's analysis is attached for your information and review. Staff's analysis and the order (if the amendment is approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the March 16, 2005 Business Meeting of the Energy Commission. If you have comments on this proposed modification, please submit them to me at the address below prior to March 16, 2005:

California Energy Commission  
1516 9<sup>th</sup> Street, MS 2000  
Sacramento, CA 95814

Comments may be submitted by fax to (916) 654-3882, or by e-mail to [ntronaas@energy.state.ca.us](mailto:ntronaas@energy.state.ca.us). If you have any questions, please contact Nancy Tronaas, Compliance Project Manager, at (916) 654-3864.

Attachment

**Elk Hills Power Project (99-AFC-1C)**  
**Petition to Extend Cold Startup Time Limits**  
**Air Quality Staff Analysis**  
**Prepared by: Joseph M. Loyer**  
**February 9, 2005**

**Amendment Request**

Elk Hill Power, LLC (EHP) has filed a petition (dated January 5, 2005) to modify Condition of Certification AQ-11 of the Elk Hill Power Project (Elk Hills) Commission Decision. This modification reflects the need to extend the cold startup time limit for Elk Hills to six hours.

**Background**

EHP was granted a license by the California Energy Commission on December 6, 2000 for a 500 megawatt, natural gas fired, combined cycle facility consisting of two GE Frame 7FA turbines with heat recovery steam generators (HRSG), oxidation catalyst, ammonia injected selective catalytic reduction system (SCR) and one steam turbine. Elk Hills is located on a 12 acre site, approximately 25 miles west of Bakersfield in Kern County, California, within the jurisdiction of the San Joaquin Valley Air Pollution Control District (District).

Elk Hills is currently being operated under a four hour startup limit as required by Condition of Certification AQ-11 by deviating from the manufacturer's recommended startup procedures. EHP is petitioning the Energy Commission to add two more hours to the startup limit, while maintaining all other operational and emission limitations on Elk Hills.

**LORS**

EHP submitted an application for this modification to the San Joaquin Valley Air Quality Management District on November 2, 2004 and was subsequently granted a new permit to operate (PTO) with the requested startup duration limit. Other than this modification, no laws, ordinances, regulations or standards will affect the petitioned amendment request.

**Analysis**

Increase of Startup

When Elk Hills was originally licensed, the startup and shutdown emission performance of the GE Frame 7FA turbines was not well documented. Through operational experience at the Elk Hills facility, EHP has determined that they can only comply with the startup duration restraint imposed by Condition of Certification AQ-11 by deviating from the manufacturer's recommended start-up procedures. EHP is requesting to extend the startup duration limit from 4 hours to 6 hours (AQ-11), which is consistent with other similar and recent power projects within California, and would also allow not deviating from GE's recommendations. EHP is not proposing to change the pounds-per-startup emission limits (AQ-15), the daily emission limits (AQ-16) or the annual emission limits (AQ-18). Since EHP is not proposing to modify the emission limits of the Elk Hills project, staff finds that there is no potential to cause an ambient air quality impact from granting the petition.

### **Conclusions and Recommendations**

Staff has analyzed the proposed changes and concludes that there are no new or additional significant impacts associated with approval of the petition. Staff concludes that the proposed changes are based on information that was not available during the original licensing procedures or subsequent amendments. Staff concludes that the proposed language retains the intent of the original Commission Decision and Conditions of Certification. Staff recommends the following modifications to Condition of Certification AQ-11.

### **Proposed Modifications to the Air Quality Conditions of Certification**

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**AQ-11** Startup is defined as the period beginning with initial turbine firing until the unit meets the lb/hr and ppmv emission limits in Condition **AQ-15**. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown duration shall not exceed the following:

- two hours for a regular startup,
- ~~four~~ six hours for an extended startup,
- and one hour for a shutdown, per occurrence. [District Rule 2201 and 4001]

**Verification:** The project owner shall provide records of compliance as part of the quarterly reports of Condition **AQ-35**.