CALIFORNIA ENERGY COMMISSION
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06-AFC-10C
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DATE: May 22, 2009

TO: Interested Parties

FROM: Chris Davis, Compliance Project Manager

SUBJECT: Starwood Power Project (06-AFC-10C)
Staff Analysis of Proposed Modification to Change Noise Survey Location and Duration

On February 26, 2009, Starwood Power-Midway, LLC, filed a petition with the California Energy Commission to amend the Energy Commission Decision for the Starwood Power Project. Staff prepared an analysis of this proposed change, and a copy is enclosed for your information and review.

The Starwood Power Project is a 120-megawatt peaking power plant located in an unincorporated area of western Fresno County. The project was certified by the Energy Commission on January 16, 2008. Construction is now complete.

The proposed modifications will allow Starwood Power-Midway, LLC to alter noise-monitoring locations and reduce the duration of the noise survey. Because the project will operate as a peaking plant, it will be very unlikely to operate continuously for 25 hours to conduct the noise survey required by the Energy Commission decision. Therefore, staff believes a 4-hour continuous survey during the quietest hours of the nighttime would gather sufficient data to demonstrate project compliance with Fresno County noise limits.

Since the Energy Commission licensed this project, it has been determined that the residence 1,300 feet from the project, originally approved as a noise-monitoring location, has no direct line of sight to the project due to a large barn that acts as a sound barrier. Therefore the proposed modification would require a revised monitoring site 400 feet from the power plant along with the originally approved monitoring site at a residence 1,600 feet from the project.

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 Condition of Certification Noise-4. 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 and staff's analysis has been posted on the Energy Commission's webpage at:
www.energy.ca.gov/sitingcases/starwood/compliance/index.html. The Energy Commission's Order (if approved) will also be posted on the webpage. Energy Commission staff intends to recommend approval of the petition at the July 15, 2009,

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 June 5, 2009.

Chris Davis, Compliance Project Manager
California Energy Commission
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Comments may be submitted by fax to (916) 654-3882, or by e-mail to CMDavis@energy.state.ca.us. If you have any questions, please contact me at (916) 654-4842.

Enclosure

NOISE AND VIBRATION
Shahab Khoshmashrab

INTRODUCTION

Starwood Power-Midway, LLC, the applicant, seeks approval to modify Condition of Certification **NOISE-4** as described in the Energy Commission Decision for Starwood Power-Midway Peaking Power Plant (project) (06-AFC-10). The proposed modifications include revising the duration of the community noise survey from 25 continuous hours to 4 continuous nighttime hours. The proposed modifications also include an alternative community noise monitoring location in lieu of noise monitoring location ML3. This alternative monitoring location would be 400 feet from the project site, as shown in **Noise Figure 1** below. In Noise Figure 1, the project site is labeled as "Midway Site."

The project was certified by the Energy Commission on January 16, 2008.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS (LORS)

The Energy Commission Decision included eight conditions of certification relating to Noise and Vibration, **NOISE-1** through **NOISE-8**.

The Fresno County General Plan and Zoning Ordinance apply to this project. The noise requirements within these LORS have not changed since the approval of the original project.

ANALYSIS

The proposed amendment includes revising the duration of the community noise survey from 25 continuous hours as required by the existing Condition of Certification **NOISE-4** to 4 continuous nighttime hours. Because the project will operate as a peaking plant, it will be very unlikely that the plant will operate continuously for 25 hours within the timeframe specified in the Verification section of Condition of Certification **NOISE-4**. Staff believes a 4-hour continuous survey during the quietest hours of the nighttime would be sufficient to gather the data needed to demonstrate project compliance with the requirements in Condition of Certification **NOISE-4**, including Fresno County's noise requirements and the Energy Commission's threshold of significance as defined in the Energy Commission Decision.

According to the applicant, since the issuance of the Energy Commission license for this project, it has been determined that ML3 has no direct line of sight to the project site due to presence of a large barn acting as a sound barrier. As a result, ML3 would be exposed to less project operation noise, and therefore noise measurements taken at that location may not accurately reflect noise from the project. Therefore, a location 400 feet from the project site would be used in lieu of ML3 for the noise survey. Staff agrees with this modification and notes that if the project's contribution to the ambient noise level at a location 400 feet from the project site proves to be in compliance with Condition of Certification **NOISE-4**, then the project's contribution to the ambient noise

level at ML2, 1,300 feet from the project site, would certainly be in compliance with this condition due to its longer distance to the project site.

With the exception of the above discussion, staff's analysis associated with the original application has not changed as a result of the proposed amendment. No new sensitive noise receptors have been identified in the project area since the approval of the original project. The proposed modifications to Condition of Certification **NOISE-4** would remain in compliance with the original conditions of certification relating to Noise and Vibration and Fresno County's noise requirements.

The eight conditions of certification included in the Energy Commission Decision would still apply, with one change (see below).

CUMULATIVE IMPACTS

This amendment would result in no cumulative impacts.

CONCLUSION AND RECOMMENDATIONS

The proposed modifications to Condition of Certification **NOISE-4** will not result in significant impacts on noise and vibration. Staff recommends approval of this request and proposes the following changes to this condition of certification.

PROPOSED CHANGES TO CONDITIONS OF CERTIFICATION

Added text is underlined and deleted text is shown as ~~strikethrough~~.

NOISE-4 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause noise levels due to plant operation plus ambient, during the four quietest consecutive hours of the nighttime, to exceed an average of 45 dBA L_{50} as measured near monitoring location~~s~~ ML2 (approximately 1,600 feet west of the center of the project site) and~~ML3 (43405 West Panoche Road)~~ as measured near a location 400 feet from the project site (as shown in **Noise Figure 1**).

No new pure-tone components may be caused by the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

- When the project first achieves a sustained output of 90 percent or greater of rated capacity, the project owner shall conduct a ~~25~~4-hour community noise survey at monitoring location ML2 or at a closer location acceptable to the CPM. This survey during power plant operation shall also include measurement of one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been caused by the project.

During ~~the period of~~ this survey, the project owner shall also conduct a ~~short term~~ 4-hour noise survey ~~of noise~~ at ~~monitoring location~~ a location 400 feet from the project site (as shown in **Noise Figure 1**) ~~ML3, or at a closer location acceptable to the CPM~~.

The ~~short-term~~ above noise measurements shall be conducted during ~~every hour of~~ four consecutive hours within the nighttime period ~~hours~~, from 10 p.m. to 7 a.m.~~, during the period of the survey~~.

- The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected receptor locations to determine the presence of pure tones or other dominant sources of plant noise.

- If the results from the above noise survey indicate that the power plant noise level plus ambient (L_{50}) at the affected receptor sites exceeds the above value during the above specified time periods, mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.

- If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within ~~30~~60 days of the project first achieving a sustained output of 90 percent or greater of rated capacity. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report shall be a description of any additional mitigation measures necessary to achieve compliance with the above-listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of this new noise survey, performed as described above and showing compliance with this condition.

REFERENCES

Starwood Power-Midway 2009a – Starwood Power-Midway Peaking Power Plant (06-AFC-10) License Amendment to Revise Condition of Certification **NOISE-4**, Docketed February 26, 2009.

NOISE - FIGURE 1

Starwood Power-Midway - Noise Monitoring Locations

CALIFORNIA ENERGY COMMISSION, SYSTEMS ASSESSMENT & FACILITIES SITING DIVISION, APRIL 2009

SOURCE: AFC Amend 3, Figure 1