

DOCKETED

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CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov



December 20, 2013

Stephen O'Kane
AES Southland, LLC
690 Studebaker Road
Long Beach, CA 90803

Regarding: **REDONDO BEACH ENERGY PROJECT (12-AFC-03)**
DATA REQUEST SET 2 (Nos. 67-70)

Dear Mr. O'Kane,

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of Data Requests (Nos. 67-70) are being made in the technical areas of: Air Quality (Nos. 67-68), and Noise (No. 69-70). Written responses to the enclosed data requests are due to the Energy Commission staff on or before January 20, 2014.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 654-4063.

Sincerely,

Originally signed by:
Patricia Kelly, Siting Project Manager
Siting, Transmission and Environmental
Protection Division

Enclosure (Data Request Packet)

cc: Docket (12-AFC-03)

REDONDO BEACH ENERGY PROJECT
(12-AFC-03)

Energy Commission Staff's Data Requests Set 2 (Nos. 67-70)

December 20, 2013

**REDONDO BEACH ENERGY PROJCT (12-AFC-03)
DATA REQUESTS – SET 2**

Technical Area: Air Quality
Author: Joseph Hughes

COMMISSIONING IMPACTS: BACKGROUND

In Data Response Set 1A (TN: 201383), response to data request number 10, the applicant provided the expected annual impacts associated with commissioning of the three combustion turbine generators (CTGs). It is apparent from the proposed project schedule (as stated in AFC page 5.1-1) that demolition of units 5-8 and auxiliary boiler 17, and ongoing construction activities associated with Redondo Beach Energy Project (RBEP) construction (e.g. new control building and relocation of the Wayland Whaling Wall) would occur simultaneously to commissioning of the CTGs (months 43-48). Staff needs to evaluate potential worst case impacts associated with all phases of the project, including the potential emissions overlap from commissioning of the CTGs, demolition of units 5-8 and 17, and construction activities associated with RBEP construction.

DATA REQUEST

67. Please provide air quality modeling impacts for all criteria pollutants and averaging periods during worst-case conditions, which appear to include: (1) overlap of commissioning of the CTGs, (2) demolition of units 5-8 and 17, and (3) construction activities associated with RBEP construction.

AIR COOLED CONDENSER: BACKGROUND

Staff plans to perform a plume velocity analysis for the gas turbines and air cooled condenser (ACC) for the Redondo Beach Energy Project (RBEP) necessary to evaluate any potential plume impacts on aircraft flying in the immediate vicinity of the project. The applicant provided operating parameters for the ACCs at Huntington Beach Energy Project (HBEP) in data responses DR87-1 and DR87-2. Staff considered using this data for the RBEP as the operating and exhaust parameters are expected to be similar for the ACCs at both sites. However, there are slight differences in the data provided for the two power blocks at the HBEP, so staff would like the applicant to provide/confirm exhaust parameters for the ACC at the RBEP.

DATA REQUEST

68. Please summarize the operating conditions for the ACC, including heat rejection, exhaust temperature, and exhaust velocity. Please provide values to complete the table, and additional data as necessary for staff to determine how the heat rejection load varies with ambient conditions and also determine at what conditions ACC cells may be shut down, and for staff to model thermal plume. The ambient conditions included in this table correspond to those in AFC Table 5.1B.2 for gas turbines, and are similar to the ambient cases in which ACC exhaust parameters were provided for HBEP (DR87-1 and DR87-2). The applicant can provide ACC exhaust parameters for other similar ambient conditions in place of the ambient conditions requested herein if desired.

**REDONDO BEACH ENERGY PROJCT (12-AFC-03)
DATA REQUESTS – SET 2**

The ambient conditions included in this table correspond to those in AFC Table5.1B.2 for gas turbines.

Parameter	Air Cooled Condenser					
Number of Cells						
Cell Height						
Cell Diameter						
Ambient Temperature	33°F		63.3°F		106°F	
Ambient Relative Humidity	93.80%		75.20%		9.60%	
Duct Firing	Yes	No	Yes	No	Yes	No
Number of Cells in Operation						
Heat Rejection (MW/hr)						
Exhaust Temperature (F)						
Exhaust Velocity (ft/s)						
Exhaust Flow Rate (lb/hr)						

**REDONDO BEACH ENERGY PROJCT (12-AFC-03)
DATA REQUESTS – SET 2**

Technical Area: Noise
Authors: Edward Brady and Shahab Khoshmashrab

BACKGROUND

In an environment similar to that surrounding the project site, in a typical evening, air is coldest near the ground and air temperature increases at higher altitudes. This temperature gradient causes sound waves to refract downward. This condition, often referred to as a temperature inversion causes sound to bend downward toward the ground and results in louder noise levels at the listener position. Temperature gradients can influence sound propagation over long distances and cause more adverse impacts at noise receptors than under normal conditions (without inversion). At the Data Request Workshop conducted on December 5, 2013, the applicant stated that it has accounted for the effect of weather inversion in its operational noise modeling, but staff and the applicant did not discuss the details of the resulting effect at any of the noise receptors in the area surrounding the project site. Since the effect of inversion may be realized at the noise-sensitive receptors located at relatively far distances to the project site, staff needs the following information in order to incorporate a complete discussion of this effect in the Preliminary Staff Assessment.

DATA REQUEST

69. Please explain what the effect of temperature inversion is at distances of 0.5-1.0 mile from the center of the project's power block. Please explain whether or not its effect would be different than if the project's operational noise modeling were performed without considering temperature inversion. If the effect is different, then explain this effect in terms of sound levels at the above distances, and discuss whether or not the resulting sound levels would comply with the applicable noise thresholds required by all the local jurisdictions within 1.0 mile of the RBEP.

BACKGROUND

The project site is located next to a marine harbor at sea level. The topography in the area east of the project site slopes upward along the lines of North Catalina Avenue and the Pacific Coast Highway. Noise from the power block can be refracted on the noise receptors at the elevated areas east of the site. Staff needs to know if these changes in elevation would in fact cause project-related acoustical irregularities at these receptors.

DATA REQUEST

70. Please explain the acoustical effects of these changes in elevation in project sound levels that would be heard by the noise receptors located at the higher elevations described above, and discuss whether or not the resulting sound levels would comply with the applicable noise thresholds required by all the local jurisdictions in which these receptors are located.