DOCKETED

Docket Number:	13-AFC-01
Project Title:	Alamitos Energy Center
TN #:	207436
Document Title:	Data Request Set 7 (No. 169)
Description:	Energy Commission Staff's Data Request Set 7 for the AEC
Filer:	Christopher Meyer
Organization:	California Energy Commission
Submitter Role:	Commission Staff
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CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

January 15, 2016

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

Regarding: **ALAMITOS ENERGY CENTER (13-AFC-01)**
DATA REQUESTS SET 7 (No. 169)

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 request. The information requested is necessary to: 1) more fully understand the project, and 2) assess whether the facility will be constructed and operated in compliance with applicable regulations. This second set of Data Requests on the Supplemental Application for Certification (SAFC) filed on October 26, 2015 (No. 169) is being made in the technical area of Traffic and Transportation, specifically on thermal plume modeling. Written responses to the enclosed data requests are due to the Energy Commission staff on or before February 15, 2016.

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 request. 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) 654-4640.

Sincerely,

/ Original Signed /

Christopher Meyer, Siting Project Manager
Siting, Transmission and Environmental
Protection Division

Enclosure (Data Request Packet)
cc: Docket (13-AFC-01)

ALAMITOS ENERGY CENTER
(13-AFC-01)

Energy Commission Staff's Data Requests Set 7 (No. 169)

January 15, 2016

Technical Area: Traffic and Transportation – Thermal Plume
Author: Nancy Fletcher

Thermal Plume Velocity Modeling Data

BACKGROUND

Staff will evaluate the thermal plume velocities for the Alamitos Energy Center (AEC) exhaust stacks and heat rejection devices. Exhaust parameters are needed to complete the analysis. This analysis is necessary to evaluate any potential thermal plume vertical velocity impacts on aircraft flying in the immediate vicinity of the project. Stack information was provided for the proposed combustion turbine and the auxiliary boiler exhaust stacks, however information for the air cooled condenser (ACC for the combined cycle) and fin fan coolers (for the LMS100 intercoolers) were not included.

DATA REQUEST

169. Please provide values to complete the tables below, and additional data as necessary for staff to determine how the heat rejection load varies with ambient conditions and operating scenarios. Also, please determine at what conditions cooling cells may be shut down. These data are needed to enable staff to model thermal plume vertical velocities. The ambient conditions included in these tables correspond to those in Supplemental AFC Appendix Table 5.1B for the combustion turbines and can be changed as necessary to represent the project site and operating scenarios. In addition please provide the distance between adjacent cells and the distances between the heat rejection devices in order to determine if the individual plumes will merge.

Parameter	**Combined Cycle Air Cooled Condenser**		
Number of Cells			
Cell Height (ft)			
Cell Diameter (ft)			
Distance Between Cells (ft)			
Ambient Temperature	28ºF	65.3ºF	107ºF
Ambient Relative Humidity	76%	87%	11%
Number of Cells in Operation			
Heat Rejection (MW/hr)			
Exhaust Air Temperature (F)			
Exhaust Velocity Per Cell (ft/s)			
Exhaust Flow Rate (lb/hr)			

Parameter	**Simple Cycle Fin Fan Coolers**		
Number of Cells (Fans)			
Cell Height (ft)			
Cell Diameter (ft)			
Distance Between Cells (ft)			
Ambient Temperature (ºF)	28ºF	65.3ºF	107ºF
Ambient Relative Humidity	76%	87%	11%
Number in Operation			
Heat Rejection (MW/hr)			
Outlet Air Temperature (ºF)			
Outlet Air Exit Velocity (ft/s)			
Outlet Air Flow (lb/hr)			