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December 13, 2012

VIA EMAIL

Mr. Jason Pyle
9071 Kapaa Drive
Huntington Beach, California 92646

Ms. Felicia Miller, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Re: Huntington Beach Energy Project (12-AFC-02)
Applicant's Responses to Intervenor Jason Pyle's Data Requests, Set 1 (#1-16)

Dear Mr. Pyle and Ms. Miller:

On or about November 16, 2012, Applicant AES Southland Development, LLC received data requests from Mr. Pyle, an intervenor in the Huntington Beach Energy Project Application for Certification proceeding. Applicant's responses to Mr. Pyle's requests are due on or before December 16, 2012. To that end, enclosed herein Applicant provides responses to such data requests and via this correspondence requests the California Energy Commission Docket Unit to docket the responses. This correspondence and the enclosure will be served on the parties identified on the service list as set forth in the attached Proof of Service.

Respectfully submitted,

Melissa A. Foster

MAF:jmw
Enclosure
cc: See Proof of Service List

Huntington Beach Energy Project

(12-AFC-02)

Responses to Intervenor Pyle's Data Requests, Set 1

(Data Requests # PYLE-1 through PYLE-16)

Submitted to

California Energy Commission

Prepared by

AES Southland Development, LLC

With Assistance from

CH2MHILL®
Suite 600
Sacramento, CA 95833

December 13, 2012

Contents

Introduction

Attached are AES Southland Development, LLC's (AES or the Applicant) responses to the Intervenor Jason Pyle's Data Requests, Set 1 (numbers 1 through 16) regarding the Huntington Beach Energy Project (HBEP) (12-AFC-02) Application for Certification (AFC).

New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 1 would be numbered Table DR PYLE-1. The first figure used in response to Data Request 2 would be Figure DR PYLE2-1, and so on. Figures or tables from the HBEP AFC that have been revised have "R1" following the original number, indicating revision 1.

Additional tables, figures, or documents submitted in response to a data request (for example, supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially paginated consistently with the remainder of the document, though they may have their own internal page numbering system.

Data Requests PYLE (1–16)

DATA REQUEST

1. Please provide how many feet closer to the residential homes Block 1 will be then the current Plant 1 and 2.

Response:

As noted in Figure DR PYLE-1, the distance from the residential area located east of the existing Huntington Beach Generating Station Units 1 and 2 is approximately 2,155 feet. Huntington Beach Energy Project (HBEP) Block 1 will be partially constructed on the site of peaking gas turbine Unit 5, which was commissioned in 1969 and retired in 2001. The distance from the residential area located east of HBEP Block 1 and the former Unit 5 is approximately 1,620 feet. These distances where calculated from the first residential home on the southeast corner of Magnolia Street and Banning Avenue to the center of HBEP Block 1 and from the nearest point of existing Huntington Beach Generating Station Units 1 and 2.

Although HBEP Block 1 will be closer to residents located across Magnolia Street than the existing Huntington Beach Generating Station Units 1 and 2, HBEP Block 1 will be approximately 1,500 feet farther away from residents located on the west side of Newland Street than the existing Huntington Beach Generating Station Units 1 and 2. The existing site boundaries will not change and new equipment will not encroach onto areas beyond the site boundaries.

DATA REQUEST

2. Please provide a thorough assessment of the proposed projects anticipated noise avoidance and mitigation measures to offset the direct and indirect temporary and permanent impacts of elevated noise levels. Please list specifically the values of the mitigation and attenuation measures.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections and as noted in Applicant's December 6, 2012, correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013.

DATA REQUEST

3. Please identify what is a "feasible" mitigation measure as stated in 5.7.6.2. Also please describe how you will measure "feasibility."

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections, regardless of the use of the term "feasible" in Section 5.7.6.2 of the AFC, any definition of the term or how it will be measured as provided by Applicant is irrelevant. Ultimately, the California Energy Commission (CEC) has exclusive jurisdiction over the project to determine what project noise levels must be to comply with applicable laws, ordinances, regulations and standards and with the CEC's California Environmental Quality Act obligations as defined by the Warren-Alquist Act. Moreover, as noted in Applicant's December 6, 2012, correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013, that may contain a summary of additional possible design measures that are available to Applicant to ensure acoustical performance requirements are realized.

DATA REQUEST

4. Please identify when it will be determined if the applicant is going to use "high or low pressure blower". Also, please provide the calculations used to determine the decibel affect created by both "low" and "high" pressure blowers.

Response:

This request seeks information on the intended use of low and high pressure "blowers" and decibel calculations for the noise generated. It is assumed that the request is for information on steam blows, which is a temporary activity during the final stages of construction when steam is used to clean pipe and tubing to remove any scale or other construction debris. As is typical of similar construction-related activities, the details of the steam blows will be determined during the construction phase by the construction contractor in conformance with the CEC's Conditions of Certification. The calculations used to determine the noise generated during steam blows are complex and can be found in various engineering texts. The steam pressure is only one of the variables in the calculation. As noted in Section 5.7.6.3 of the AFC, if it is decided during the construction phase to use a high-pressure steam blow process, the steam blow piping will be equipped with a temporary silencer to limit steam blow noise to no more than 89 dBA at a distance of 50 feet. Also, high-pressure steam blows would be restricted to daytime hours (7:00 a.m. to 8:00 p.m.) from Monday through Saturday. If it is decided to use the quieter, low-pressure process, the project owner will prepare a description that includes the expected noise levels and planned hours of operation consistent with the Conditions of Certification that have been established for other projects.

DATA REQUEST

5. Please determine the expected noise levels and the extent and duration of noise and attenuation across the site and into the residential areas during construction and demolition. Specifically affecting the homes at the intersection of Magnolia and Banning.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections and as noted in Applicant's December 6, 2012, correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013.

DATA REQUEST

6. Please provide a model (isopleths map) of what the calculated noise will be in the surrounding neighborhoods when both Block 1 and Block 2 are in full operation. Specifically at the intersection of Magnolia and Banning, Newland and PCH.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections and as noted in Applicant's December 6, 2012, correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013.

DATA REQUEST

7. Please provide a model (isopleths map) of what the current ambient noise is currently in the surrounding neighborhoods off Magnolia, Newland and Hamilton, specifically the hours of 10 pm to 7 am. Please provide what the current ambient noise is when the current plant is in full operation and when the current plant is not operating. Specifically between the hours of 10 pm to 7 am.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections and as noted in Applicant's December 6, 2012, correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013.

DATA REQUEST

8. Please identify the currently used meteorology data identifying the prominent weather patterns for the site, specifically wind.

Response:

Standard acoustical engineering methods were used in the HBEP noise analysis. The sound propagation factors used in the model have been adopted from ISO 9613-2, *Acoustics—Attenuation of Sound during Propagation Outdoors—Part 2: General Method of Calculation* (ISO, 1996). The ISO 9613-2 model is based on an omni-directional downwind condition. That is, the noise prediction algorithms assume every point at which sound level is calculated is downwind of all noise sources simultaneously. While this is physically impossible, the ISO 9613-2 model provides a conservative analysis of predicted noise levels and has been widely and successfully used to develop acoustical models for similar energy facilities. When receivers are located in an actual upwind or crosswind condition, lower sound levels may be expected. This analysis focuses on the more conservative downwind condition, consistent with ISO 9613-2.

DATA REQUEST

9. Please model (isopleth map) the cumulative noise (db) by all operations on the site, including the proposed power plant and the proposed desalination plant.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee.

DATA REQUEST

10. Please model (isopleth map) the cumulative noise by all operations on the site, including the proposed power plant and the proposed desalination plant as to what the db levels will be in the residential neighborhoods off Magnolia, Newland and Hamilton. Please provide how many feet closer to the residential homes Block 1 will be then the current Plant 1 and 2.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee.

DATA REQUEST

11. Please correct the conflicting data submitted in the AFC, specifically the inconsistency between sections 5.7-10 that states anticipated steady state noise levels of 60 – 63 db and the City of Huntington Beach noise standards as regulated in the City Charter, Chapter 8.4., Section 8.40.050 indicates that the maximum db in a residential zone will be 50–55 db.

Response:

Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's December 6, 2012 correspondence to Mr. Pyle and the Siting Committee. Notwithstanding such objections and as noted in Applicant's December 6, 2012 correspondence, Applicant will be providing additional noise data and analysis by January, 18, 2013. Such information will address noise associated with HBEP in relation to applicable LORS. The January 2013 submittal will specifically include an analysis of predicted project sound levels at offsite locations in tabular and graphic form (iso-dBA sound level contours) and will demonstrate that HBEP will comply with all applicable noise LORS.

DATA REQUEST

12. Please provide how many hours the current power plant operated in 2011. Please identify for specifically Generating Plant 1 & 2, Plant 3 & 4 and combined.

Response:

In 2011, the hours of operation for Huntington Beach Generating Station Units 1 and 2 was 6,185 hours and Huntington Beach Generating Station Units 3 and 4 was 3,533 hours. The number of hours that at least one of the four Huntington Beach Generating Station Units was operating in 2011 was 7,376 hours.

DATA REQUEST

13. Please provide how many hours the current power plant operated in 2011, between the hours of 10pm and 7am. Please identify specifically Generating Plant 1 & 2, Plant 3 & 4 and combined.

Response:

In 2011, the hours of operation between 10:00 pm and 7:00 am for Huntington Beach Generating Station Units 1 and 2 was 2,319 hours and Units 3 and 4 was 1,340 hours. The amount of hours that at least one of the four units was operating in 2011 between the hours of 10:00 pm and 7:00 am was 2,722 hours.

DATA REQUEST

14. Please identify the anticipated number of hours of operation that block 1 and block 2, both separately and combined, will operate in a given year.

Response:

HBEP will operate as a dispatchable facility to serve local area reliability, peak energy needs, and assist the California Independent System Operation (CAISO) and local utility in balancing generation and load on a real-time basis, as increasing amounts of intermittent renewable energy are relied upon to serve southern California. Because HBEP will be operated to respond to the immediate need of the balancing authority or utility, it is impossible to accurately predict how many hours in a given year, month or day it could operate. Past operating hours of the existing Huntington Beach Generating Station cannot be used as a predictor of future operating hours for HBEP because the generating equipment and the market each serve are not comparable. The Huntington Beach Generating Station was originally designed and built as a baseload generating facility to be run almost constantly, while HBEP is designed to serve an intermediate load market and frequently turn on and off.

Although it is impossible to predict exactly the annual operating hours for HBEP, some general design assumptions have gone into the development of the project. HBEP is designed to serve an intermediate load market. The

future market it would serve would require the individual turbines and generators to be able to start, stop, and ramp up and down in power output frequently to match the electrical load on the system. It is expected that each turbine would be required to start up to three times per day during the most demanding time of the year, and it is expected that it could operate at an approximate annual capacity factor of up to 40 percent. This means that the entire plant is expected to produce approximately 40 percent of the total electricity it could produce in a given year, and not that the plant would be running only 40 percent of the time. It is expected that a majority of the time the plant would be in operation, only two gas turbines in each power block would be operating, thereby producing only about 75 percent of the maximum power output. At other times, only one gas turbine per power block would be required and three gas turbines per block would be required less than a third of the time the plant would be in operation. It is also expected that while HBEP would be in operation 12 months of the year, the majority of the output from the plant would be between May 1 and October 31. Lastly, because of the rapid start/stop capability of HBEP, it is also expected that the plant would be shut down more often during low load periods than the current Huntington Beach Generating Station.

DATA REQUEST

15. Please identify the anticipated number of hours of operation that block 1 and block 2, both separately and combined, will operate in a given year between the hours of 10 pm and 7 am.

Response:

For the same reasons outlined in response to Data Request PYLE-14 above, it is also impossible to predict how many hours per year HBEP could operate between the hours of 10:00 pm and 7:00 am. However, considering the fact that these hours represent the hours of lowest electricity demand; the current Huntington Beach Generating Station is often kept running at very low output during these hours for no other reason than the very lengthy start-up times the current plant requires (over 18 hours); and that the HBEP would be able to start in as little as 10 minutes, it is expected that the HBEP would be shut down during these time periods more often than if the current generating station were to remain.

DATA REQUEST

16. Please provide further date[sic] as to the following. On the day that the ambient noise study was conducted was the current power plant in operation? If so please provide data as to the hours of operation and as to what level of power production.

Response:

This request seeks information for the day that the ambient noise study was conducted and the operational status of the current power plant during the measurements. The noise monitoring was actually conducted over multi-day periods at each of the four monitoring locations. The noise monitoring results for all of the locations are tabulated on an hourly basis in Appendix 5.7A of the AFC. The hourly output from the Huntington Beach Generating Station varied from 20 MW to 450 MW over the noise monitoring period. The average hourly power output over this period was 136 MW.

Additional noise monitoring was conducted in September 2012. The monitoring results and the power output of the current power plant during the monitoring period will be included in the analysis that will be provided in January 2013. As such, and as noted in Applicant's December 6, 2012, correspondence to Mr. Pyle and the Siting Committee, Applicant will be providing additional information in response to Data Request PYLE-16 on or before January 18, 2013.

Legend

- Distance from the residential area to Existing Huntington Beach Generating Station Units 1 and 2
- Distance from the residential area to HBEP Block 1
- Distance from the residential area to former Unit 5
- AES Huntington Beach Generating Station
- AES Huntington Beach Energy Project

N

0 250 500 Feet

Figure DR PYLE-1
Distance of Residential Area
AES Huntington Beach Energy Project
Huntington Beach, California

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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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APPLICATION FOR CERTIFICATION FOR THE HUNTINGTON BEACH ENERGY PROJECT

Docket No. 12-AFC-02
(Revised 10/08/12

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*indicates change

DECLARATION OF SERVICE

I, Judith M. Warmuth, declare that on December 13, 2012, I served and filed a copy of the attached Applicant's Responses to Intervenor Jason Pyle's Data Requests, Set 1 (#1-16) dated December 13, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/huntington_beach_energy/index.html.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(*Check all that Apply*)

For service to all other parties:

☒ Served electronically to all e-mail addresses on the Proof of Service list;

☐ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked ***"hard copy required"** or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

☒ by delivering one electronic copy and one hard copy to the address below to the Docket Unit; **OR**

☐ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 12-AFC-02
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

☐ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

JUDITH M. WARMUTH