



California Energy Commission

**DOCKETED**  
**12-AFC-02**

TN # 69545

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February 15, 2013

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**VIA EMAIL**

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

**Re: Huntington Beach Energy Project (12-AFC-02)**  
**Applicant's Responses to Data Requests, Set 3 (#99-103)**

Dear Ms. Miller:

On behalf of Applicant AES Southland Development, LLC, please find enclosed herewith Applicant's responses to Staff's Data Requests, Set 3 (#99-103). Should you have any questions regarding these responses, please contact Robert Mason or me directly.

Respectfully submitted,

A handwritten signature in black ink that reads "Melissa A. Foster". The signature is written in a cursive, flowing style.

Melissa A. Foster

MAF:jmw

Enclosure

cc: Proof of Service

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# Huntington Beach Energy Project

(12-AFC-02)

## Data Responses, Set 3 (Response to Data Requests 99 to 103)

Submitted to  
**California Energy Commission**

Prepared by  
**AES Southland Development, LLC**

With Assistance from

**CH2MHILL®**

2485 Natomas Park Drive  
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February 15, 2013

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# Introduction

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Attached are AES Southland Development, LLC's (AES or the Applicant) responses to the California Energy Commission (CEC) Data Request, Set 3 (Soil and Water Resources, requests 99 through 103) regarding the Huntington Beach Energy Project (HBEP) (12-AFC-02) Application for Certification (AFC).

The responses are presented in the same order as the CEC presented them and are keyed to the Data Request numbers.

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 99 would be numbered Table DR99-1. The first figure used in response to Data Request 100 would be Figure DR100-1, 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 page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

# Soil and Water Resources (99–103)

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## BACKGROUND

Multiple predictive studies of relative sea-level rise indicate that the proposed project area could be affected during the life of the project. Projections indicate a relative mean sea-level rise along the southern California coast ranging from 4 to 30 centimeters (cm) by the year 2030 (CEC, 2009; NAS, 2012). The site geotechnical report (Ninyo & Moore, 2011) acknowledges future sea-level rise. An Energy Commission study (CEC, 2009) also shows the project site may have reduced flood protection and inundation potential in the future. A significant rise in local sea water levels would also raise groundwater levels, decrease relative flood protection currently afforded by levees along the Huntington Beach Flood Channel, raise the fluvial base level thereby increasing the rate and extent of flooding and potentially impact foundation integrity (increased liquefaction potential) of the power plant.

## References

CEC, 2009. The Impacts of Sea-Level Rise on the California Coast, Final Paper. California Energy Commission, Docket CEC-500-2009-024-F.

FEMA, 2012. Flood Insurance Rate Map 6059C0263J, December 3, 2009. Accessed at <https://msc.fema.gov>, on January 3, 2013.

NAS, 2012. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. National Academy of Sciences, Committee on Sea Level Rise in California, Oregon, and Washington. ISBN: 978-0-309-25594-3

Ninyo & Moore, 2011. Preliminary Geotechnical Evaluation, Huntington Beach Generating Station. Prepared by Ninyo & Moore, December 2, 2011.

## DATA REQUEST

99. Please discuss how AES considered current and future sea levels in the design and location of critical plant equipment, or in the design and maintenance plans of flood protection infrastructure?

**Response:** This request requires the Applicant to address the impact of the environment on the project, not the project's impacts on the environment. However, "identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes." (*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 475 [holding that, despite CEQA Guidelines section 15126.2(a), an EIR need not identify or analyze effects on the project caused by the environment].) Thus, the information sought herein exceeds the requirements of CEQA. Notwithstanding the foregoing, the HBEP site is approximately 14 feet above existing mean sea level. As noted above in CEC staff's background section and in the references cited by staff, sea levels are rising as a result of climate change and, by 2030, forecast mean sea level in southern California is predicted to rise between 4 cm to 30 cm (approx 1.5 inches to 1 foot) due to climate change (CEC, 2009). By 2050, forecast mean sea level in southern California may rise by 0.5 meter (approximately 1.5 feet) (CEC, 2009, pg 8, Fig 2). In addition, with the rise in sea level, wave-induced storm surges and higher wave run-up may affect coastal areas. The CEC 2009 report (p. 8) includes a forecast of wave-induced storm surges in California of up to 1.5 meters (approximately 5 feet).

Depending on a number of factors, the HBEP facility has a projected operational expectancy of approximately 30 years, or until approximately 2050 based on an expected commercial operation date (COD) of 2018 to 2020. The combination of predicted sea level rise (approximate 1.5 feet) and increased wave-induced storm surges (approximately 5 feet) in southern California could result in an increase depth of inundation in the area of the HBEP site of approximately 6.5 feet from wave-induced storm surges; however, as the site's existing elevation is

approximately 14 feet above existing mean sea level, there would still be a buffer of approximately 7.5 feet on the HBEP site through its expected operational period of approximately 2050 (based on a COD of 2020 and 30 years of site operations).

At this early stage of the project, detailed design and engineering of HBEP have not begun. As is consistent with power plant development under the jurisdiction of the CEC, the Applicant expects to contract with an Engineering, Procurement and Design (EPC) firm post-licensing of HBEP by the CEC. The design and engineering of HBEP will meet applicable laws, ordinances, regulations, and standard (LORS), including, but not limited to, California and federal building code requirements, as well as the applicable LORS of the City of Huntington Beach and Orange County. The detailed design and engineering for HBEP will be provided to the Chief Building Official (CBO) assigned to HBEP.

Regarding the location of critical HBEP equipment on the site, please refer to the applicant's Response to Data Request CCC-5 in the applicant's Data Response Set 1A.

## DATA REQUEST

100. Please describe existing structures or those proposed to be installed that will provide adequate flood protection that incorporate predicted sea level rise, i.e. raised foundations, berms, etc. How else will the site maintain its current Federal Emergency Management Agency (FEMA) status?

**Response:** As discussed in Data Response 99 above, at this stage of the AFC proceeding detailed design and engineering of HBEP have not begun. The Applicant expects to contract with an EPC firm post-licensing of HBEP by the CEC. The design and engineering of HBEP will meet applicable LORS including those related to flood protection, including, but not limited to, California and federal building code requirements, and applicable LORS of the City of Huntington Beach and Orange County. The design and engineering of HBEP will address any applicable LORS related to sea level rise, storm surge/wave run-up inundation, and site flooding protection. The detailed design and engineering for HBEP will be provided to the CBO assigned to HBEP.

## DATA REQUEST

101. Please describe whether the existing Huntington Beach Flood Channel is adequate for flood protection considering projected sea-level rise effects.

**Response:** The existing flood control channels in the vicinity of the HBEP site are owned, designed, operated, maintained and, as required, improved by the Orange County Public Works Flood Section. This includes improvements and modifications that may be required to address potential sea level rise and coastal inundation from climate change. Flood control and flood protection is by its very nature a regional issue and is the responsibility of local jurisdictions, such as the Orange County Public Works Flood Section. The best source of information regarding the existing flood control system in the vicinity of HBEP is the Orange County Public Works Flood Section.

## DATA REQUEST

102. Please describe whether the applicant would have any role in maintenance of the Huntington Beach Flood Channel or other flood control facilities that would protect the site.

**Response:** As discussed in response to Data Request 101, maintenance of the Huntington Beach Flood Control Channel and other flood control facilities in the vicinity of the HBEP site is the responsibility of the Orange County Public Works Flood Section.

## DATA REQUEST

103. Please discuss whether foreseeable increases in groundwater levels due to projected sea-level rise would increase liquefaction potential.

**Response:** As discussed in Data Response 99 above, at this time, detailed design and engineering of HBEP have not begun. The Applicant expects to contract with an EPC firm post-licensing of HBEP by the CEC. The design and engineering of HBEP will meet applicable LORS, including but not limited to California and federal building code requirements, and the applicable LORS of the City of Huntington Beach and Orange County. As part of the design and engineering, site conditions and factors will be taken into account, including any potential for liquefaction. The detailed design and engineering for HBEP will be provided to the CBO assigned to HBEP.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – WWW.ENERGY.CA.GOV**

***APPLICATION FOR CERTIFICATION FOR THE  
HUNTINGTON BEACH ENERGY PROJECT***

**Docket No. 12-AFC-02  
PROOF OF SERVICE  
(Revised 02/11/2013)**

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California Energy Commission –  
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**OTHER ENERGY COMMISSION  
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CONVENIENCE ONLY):**

***After docketing, the Docket Unit will provide a copy to the persons listed below. Do not send copies of documents to these persons unless specifically directed to do so.***

ANDREW McALLISTER  
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Adviser to Commissioner McAllister

Patrick Saxton  
Adviser to Commissioner McAllister

Galen Lemei  
Adviser to Commissioner Douglas

Jennifer Nelson  
Adviser to Commissioner Douglas

Eileen Allen  
Commissioners' Technical  
Adviser for Facility Siting

**DECLARATION OF SERVICE**

I, Judith M. Warmuth, declare that on February 15, 2013, I served and filed copies of the attached Applicant's Responses to Data Requests, Set 3 (#99-103) dated February 15, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at:  
[http://www.energy.ca.gov/sitingcases/huntington\\_beach\\_energy/index.html](http://www.energy.ca.gov/sitingcases/huntington_beach_energy/index.html).

The document has been sent to the other parties on the Service List above in the following manner:

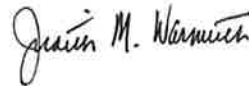
**(Check one)**

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- I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those parties noted above as "hard copy required"; **OR**
- Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: February 15, 2013



\_\_\_\_\_  
Judith M. Warmuth