

## DOCKETED

<b>Docket Number:</b>	13-AFC-01
<b>Project Title:</b>	Alamitos Energy Center
<b>TN #:</b>	216938
<b>Document Title:</b>	Errata to the Presiding Member's Proposed Decision
<b>Description:</b>	Includes responses to comments received on the Presiding Member's Proposed Decision during the public comment period
<b>Filer:</b>	Cody Goldthrite
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Committee
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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:

**ALAMITOS ENERGY CENTER**

Docket No. 13-AFC-01

**ERRATA TO THE PRESIDING MEMBER'S PROPOSED DECISION**

After reviewing the comments submitted by the parties and members of the public, we incorporate the following changes<sup>1</sup> into the February 13, 2017, Presiding Member's Proposed Decision (PMPD) for the Alamitos Energy Center:

INTRODUCTION

Page 1-1, third paragraph:

On December 27, 2013, AES—Southland—Development, Alamitos Energy, LLC (Applicant) submitted...

Page 1-8, third and fourth paragraphs:

The Committee published the PMPD on [Date] February 13, 2017, subject to a 30-day comment period. The Committee conducted—and held a Committee Conference in [place] Long Beach, California on [Date] March 1, 2017. The comment period closed on March 15, 2017. The Committee filed Errata containing recommended edits on [Date] April 10, 2017.

The Energy Commission considered the PMPD and Errata at its [Date] April 12, 2017 business meeting, and [adopted/modified/rejected] the PMPD and Errata.

Page 1-9, footnote 34:

11/15/16 RT 10:5 – 11:20; TN 216401.

Page 1-9, footnote 35:

11/15/16 RT 11:25 – 14:8; 3/1/17 RT 56:8 – 58:3.

PROJECT DESCRIPTION

Page 2-1, first paragraph:

<sup>1</sup> Where text is revised, additions are shown in **bold underline** and deletions are shown in ~~strikeout~~.

On October 26, 2015, AES ~~Southland Development~~ Alamitos Energy, LLC (Applicant) submitted a...

Page 2-1, fourth paragraph:

The AGS site currently consists of three parcels totaling approximately 71.1 acres. The site comprises land identified by parcel numbers 7237-018-808 for the northern portion of the site, 7237-019-808 for the southern portion of the site and 7237-019-005 for the former aboveground storage tank farm. The AEC facility will occupy approximately 21 acres of the 71.1-acre, privately-owned brownfield AGS site.

Page 2-22, Finding of Fact number 1:

1. Alamitos Energy ~~Southland Development~~ Alamitos Energy, Limited Liability Corporation (LLC) will own and operate the Alamitos Energy Center on private land in the City of Long Beach, Los Angeles County, California.

### PROJECT ALTERNATIVES

Page 3-1, last paragraph:

AGS Units 1-6 are currently in operation and, if AEC is licensed, would continue to provide electrical service concurrent with the construction of the AEC Power Block 1. AGS Units 1, 2, and ~~5~~6 would be retired after Power Block 1 begins operations. Units 3, 4, and ~~6~~5 would likely operate until December 31, 2020, which is the final date for the AGS facility to comply with the California State Water Resources Control Board's...

Page 3-15:

This is not to say that a proposed facility's contribution to maintaining reliability of the electricity system, which may be evidenced by the existence of a power purchase agreement, is irrelevant to our analysis. For example, the existence of the power purchase agreement could inform an analysis of likely operating scenarios. It could also be relevant to our alternatives analysis if we had found that the AEC will have significant effects that could be mitigated or avoided by a smaller facility that met basic project objectives. ~~But the lack of a power purchase agreement (or other evidence demonstrating need for a proposed facility) is not a basis, in and of itself, for the Commission to disapprove a permit.<sup>2</sup> Thus, it would clearly be inappropriate for the Energy Commission to disapprove half of AEC's proposed generating capacity on the sole basis that this lacks a power purchase agreement for this capacity, absent a finding that the AEC will not cause any significant adverse impacts. **The focus of the Energy Commission's inquiry is a proposed project's potential to create environmental impacts and its consistency with LORS. Indeed, the approval of a power plant by**~~

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<sup>2</sup> *Id.*

the Energy Commission does not necessarily ensure that all or part of the approved plant will be built. While any facility must be built in conformity with the license granted, the ultimate decision to construct any generating facility is based on market forces as mediated by the CPUC procurement process. Thus, it would clearly be inappropriate for the Energy Commission to disapprove a portion of the proposed project's proposed generating capacity on the sole basis that it lacks a power purchase agreement for this capacity, absent a finding that it causes any significant adverse impacts or is inconsistent with LORS.

Page 3-18, Insert after the second paragraph:

Elizabeth Lambe, representing the LCWLT, commented that the project objectives are "too specific." Ms. Lambe also commented that the AEC violates LORS, the PMPD alternatives analysis is incomplete and insufficient because it does not consider every alternative and does not address the demand (need). Similar comments were also made in a joint letter signed by the Sierra Club, California Coastal Protection Network, 350.org, Coastal Environmental Rights Foundation, Los Angeles Waterkeeper, Surfrider Foundation, Earth Law Center, Heal the Bay, and Protect Our Communities. Dave Shukla commented that the committee should consider everything in the record and proceed with caution regarding the question of need.

Response to Comments: In this proceeding, we did not receive objections or requests for amendments to the objectives submitted by the Applicant before the evidentiary record closed. However, the Committee, and ultimately the Commission, is not bound by the language of the objectives submitted by the Applicant. In the review process, we will look beyond a narrowly drafted objective or make edits to an objective if we find its language too restrictive. Here, the AEC's project objectives are sufficient and legally adequate to balance the intent of CEQA with the Applicant's goals in pursuing the project. The project objectives are not so "specific" or narrowly tailored as to preclude an adequate alternatives analysis.

The other commenters echo points made in LCWLT's briefs. See discussion of alternatives adequacy, LORS consistency, and need under the heading "Intervenor's Challenges to the Adequacy of the AEC Alternatives Analysis," above. See also, response to comments in the POWER PLANT EFFICIENCY section of this Decision.

Isabelle Teraoka commented, asking "As conservative Republican economists are seriously promoting a Carbon and Dividend plan in Washington, it is likely

**that a natural gas plant will become costlier and costlier to operate in the not so distant future. Why spend the money on such a plant when battery storage and renewable energy options are available?”**

**Response to Comments: As explained above, battery energy storage does not generate electricity and renewable options cannot achieve most of the project’s objectives.**

**California Assembly Member, Patrick O’Donnell commented as “a strong advocate of sustainable alternative forms of energy such as the rapidly growing use of wind and solar, that when the wind doesn’t blow or the sun doesn’t shine, it is critical that we provide reliable energy for our residents and businesses in order to maintain a good quality of life and economic stability in our state.” The AEC “can be activated in minutes to meet energy demands during peak times of usage. This replaces the existing 1950’s generation plant that takes 36 hours to start up and relies on the use of sea water for cooling. The new Alamitos Energy Center will meet the energy needs of our region and the state while preserving the natural resources in our region.”**

**Response to Comments: These comments address information contained in the project objectives and project description.**

Page 3-19, Finding of Fact number 8:

Change “than” to “**of**”.

Page 3-19, Finding of Fact number 10:

Change second “of” to “**and will.**”

Page 3-19, Finding of Fact number 11:

Delete Finding of Fact number 11 as repetitive of Finding of Fact number 10.

#### **POWER PLANT EFFICIENCY**

Page 5.2-3, paragraphs 1 through 3:

Modern gas turbines embody the most fuel-efficient electric generating technology currently available. The 7FA.05 heavy duty CTG and LMS100PB CTG proposed for the AEC project are nominally rated at 376 MW net with a 60.3 percent efficiency and 109 MW net with a 44.1 percent efficiency, respectively at **International Organization for Standardization or “ISO” conditions** CAISO-conditions. **In this case, ISO Standard 27.040 for measurement of gas turbine capacity. These standard conditions are 15°C (59°F), 60 percent relative humidity, and one atmosphere of pressure.**

For Power Block 1, alternative machines that can meet the project’s objectives of the generating capacity requirements of load following electricity would be the Mitsubishi

M501G. The M501G gas turbine is nominally rated at 398 MW net and 58.4 percent efficiency at CAISO conditions in a combined-cycle configuration. For Power Block 2, alternative machines that can meet the project's objectives of the generating capacity requirements of peaking/load following services would be the Mitsubishi H-100 gas turbine in a simple-cycle configuration which is nominally rated at 101 MW and 37.8 percent efficiency LHV at CAISO conditions.

The uncontested evidence shows that for Power Block 1, the 7FA.05 also offers a significantly higher CAISO rated efficiency than the Mitsubishi M501G. Similarly, for Power Block 2, the LMS100 PB CTG offers a significantly higher CAISO rated efficiency than the Mitsubishi H-100...

Page 5.2-5, first full paragraph, last sentence:

Also, the AEC will improve the overall thermal efficiency of electricity production compared to the existing, aging AGS Units 1 through 6 due to the...

#### POWER PLANT RELIABILITY

Page 5.3-4, fourth paragraph:

The vicinity of the project site could be subject to tsunamis. The site's final graded elevation will be at least 12 feet above existing mean sea level and there would still be 4- 5.5 feet of elevation between the floodplain and the AEC site...

Page 5.3-5, under **AGENCY AND PUBLIC COMMENT**:

~~We received no public comment on power plant reliability.~~ **Elizabeth Lambe, representing the LCWLT, commented that the project would violate the 20-minute response time requirement in California ISO Tariff Section 40.3.1.1. This comment was also made by the Sierra Club, California Coastal Protection Network, 350.org, Coastal Environmental Rights Foundation, Los Angeles Waterkeeper, Surfrider Foundation, Earth Law Center, Heal the Bay, and Protect Our Communities.**

**Response to comment: This comment is addressed and considered in the Compliance with LORS section, above.**

#### TRANSMISSION LINE SAFETY AND NUISANCE

Page 5.5-6, first full paragraph:

The field strengths of most significance would be those encountered within the boundaries of the existing AGS. These field intensities will depend on the effectiveness of the applied field-reducing measures. The Applicant, AES Southland Development **Alamitos Energy**, LLC, calculated the maximum electric and magnetic field intensities expected when the two proposed line circuits are energized...

GREENHOUSE GAS EMISSIONS

Page 6.1-5, revise the second full paragraph as follows:

**Greenhouse Gas Table 2** shows estimated annual GHG emissions of CO<sub>2</sub> and CO<sub>2</sub>e for Power Blocks 1 and 2. The parameters reflect predicted actual operation to conservatively demonstrate how the plant would satisfy the requirements based on how it intends to operate.

Page 6.1-5, the last paragraph which continues as the first paragraph on page 6.1-6 as follows:

The Applicant expects the plant capacity factor of the AEC (both the combined-cycle and simple-cycle turbines each) to be below 60 percent. The proposed maximum operation of the combined cycle generators are ~~is~~ is 4,464 hours, which is a 47 percent capacity factor. The proposed maximum operation of the simple cycle generators is 2,000 hours per year, which is a 23 percent capacity factor, ~~that~~ that is well below 60 percent. Therefore, the AEC would not be subject to the SB 1368 Greenhouse Gas Emission Performance Standard (EPS) of 0.500 MTCO<sub>2</sub>/MWh. SB 1368 applies to plants that are “designed or intended” to operate as base load generation. Base load units are defined as units that are expected to operate at a capacity factor 60 percent or higher. Any assessment of the impact of a new power plant on system-wide GHG emissions must begin with the understanding that electricity generation and demand must be in balance at all times; ~~the~~ The energy provided by any new generation resource simultaneously displaces exactly the same amount of energy from an existing resource or resources. The GHG emissions produced by AEC are thus not incremental additions to system-wide emissions, but are offset by reductions in GHG emissions from those generation resources that are displaced.

Page 6.1-11, LORS Table, second and third columns:

APPLICABLE LORS		
[2] 40 Code of Federal Regulations (CFR) Parts 51 and 52	A new stationary source that emits more than 100,000 TPY of GHGs ( <u>and other criteria pollutants for which the project area attains federal air quality standards</u> ) is considered to be a major stationary source subject to PSD requirements. As of June 23, 2014 the U.S. Supreme Court has invalidated this requirement as a sole PSD permitting trigger. However, for permits issued on or after July 1, 2011, PSD applies to GHGs if	<b><u>Compliant. 40 CFR Parts 51 and 52 establish procedures for allowing new sources of air pollution to be constructed or existing sources to be modified in areas classified as attainment. Prevention of Significant Deterioration (PSD) requirements apply on a pollutant specific basis for major stationary sources. The AEC would be considered one of 28 source categories that are subject to PSD requirements for attainment</u></b>

	<p>the source is otherwise subject to PSD (for another regulated NSR pollutant) and the source has a GHG potential to emit (PTE) equal to or greater than 75,000 TPY CO<sub>2</sub>e. The proposed AEC is subject to GHG PSD analysis.</p>	<p><b><u>pollutants if facility annual emissions exceed 100 tons per year. The AEC would exceed the 100 tons per year threshold for NOx and CO and is subject to the PSD analysis requirements. AEC would also be a major stationary source of GHG (exceeding 100,000 tons per year) which requires a PSD analysis for GHGs. The facility owner submitted the PSD application to the SCAQMD and the SCAQMD issuance of the Final Determination of Compliance outline AEC's compliance with the requirements of 40 CFR Parts 51 and 52.</u></b></p> <p>The GE 7FA.05 combined-cycle turbines are also expected to comply with the federal Standards of Performance for Greenhouse Gas Emissions (or Clean Air Act section 111[b]) of 1,000 pounds of carbon dioxide per gross megawatt-hour (lb. CO<sub>2</sub>/MWh, gross) or (1,030 lb. CO<sub>2</sub>/MWh, net) for base load natural gas fueled turbines. The GE LMS-100PB simple-cycle turbines are expected to comply with the limit of 120 lb CO<sub>2</sub> per million Btus (MMBtu) of natural gas heat input for non-base load natural gas fueled turbines. Should the combined-cycle turbines operate as non-base load units, compliance with the 120 lb. CO<sub>2</sub> per MMBtu limit would be expected by the use of natural gas. Conditions of Certification AQ-E7 and AQ-E8 ensure compliance with the new standards.33</p>
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AIR QUALITY

Page 6.2-2, second full paragraph:



Power Block 2 will include four 100-MW GE LMS-100PB simple-cycle gas turbines (SCGT). Each intercooled CTG will include dry low NOx combustors, SCR equipment for NOx reduction and a catalyst to reduce CO **and VOC** emissions...

Page 6.2-20, third full paragraph:

During startup periods, it is also not feasible to meet BACT limits for all periods of operation. The AEC CCGT, SCGT and auxiliary boiler emission control equipment are not fully effective. It takes time for the catalyst to reach the recommended operating temperature. The SCAQMD is proposing cold and **non-cold**, ~~warm, and hot~~ startup events for the CCGT and ~~SCGT~~ limiting the number of startup events for the SCGT. The SCAQMD is also ~~and~~ limiting the duration, emissions from, and total number of startup events...

Page 6.2-47, insert after comments by James Gallo:

**Isabelle Teraoka commented in opposition to the project on several grounds: “1) investing in continuing to burn fossil fuels will have significant environmental impacts... burning fossil fuels brings us closer to dangerous tipping points towards runaway climate change with its attendant slew of powerful storms, droughts, and sea level rise... 2) It goes against what California has invested so much in with AB 32.”**

Page 6.2-48, insert after the first paragraph:

**Laki Tisopulos, Deputy Executive Officer of Engineering and Permitting for the South Coast Air Quality Management District commented that “the SCAQMD concluded that no changes to the FDOC were required as a result of the comments received during the PDOC re-notice period... The SCAQMD further acknowledges the receipt of CEC's Staff Comments on the Alamitos Energy Center Presiding Member's Proposed Decision (docketed on February 23, 2017, TN# 216213) and agrees with the recommended edits to the Air Quality section of the PMPD... This completes our pre-construction review of the proposed project and issuance of the Title V Facility Permit can now be completed. We await the CEC's final action on the project, prior to proceeding with issuing the Title V Facility Permit as appropriate.” (TN 216919)**

## PUBLIC HEALTH

Page 6.3-2, second paragraph through the last paragraph on page 6.3-3 before the heading “Project Description,” because it is duplicative of text on pages 6.3-6 through 6.3-7.

Page 6.3-9, third full paragraph:

Fugitive dust emissions during construction and demolition of the proposed project could occur from dust entrained during site preparation and grading/excavation at the construction site, dust entrained during onsite movement of construction vehicles on unpaved surfaces; ~~dust emissions from an onsite concrete batch plant;~~ and wind erosion of areas disturbed during construction activities.

Page 6.3-10, third full paragraph, second sentence:

The predicted chronic health index at the PMI, MEIR, MEIW, and maximum exposed sensitive receptor are 0.0026, 0.00047, 0.0026, and 0.00064, respectively.

Page 6.3-15, first paragraph:

...maximally exposed individual in a residential setting (MEIR) is 1.11, which is below the significance level. The receptor location for the MEIR is approximately 0.33 miles east of the project boundary. The maximum resident chronic HI and acute HI are 0.0028 and 0.0018, respectively.

## BIOLOGICAL RESOURCES

Page 7.1-2, third full paragraph:

Various biological resources surveys of the site, its sewer pipeline with a 100-foot buffer, laydown areas and vicinity have occurred, including one performed by the Applicant in September 2011, and supplemental surveys in 2013, and 2014, 2015 and 2016.

Page 7.1-12, last paragraph:

Southern tarplant ranges from Santa Barbara County south into Baja California, and on Santa Catalina Island. Southern tarplant occurs in the Los Cerritos Wetlands complex. The nearest record is in the northwest corner of the wetlands complex, about 200 feet south of the offsite wastewater pipeline alignment at Loynes Drive and Studebaker Road. A focused survey for southern tarplant was conducted by the Applicant in ~~during summer 2016~~1 along the pipeline route, **as well as supplemental surveys in 2013, 2014, 2015, and 2016,** concluded that the plant was not present.

Page 7.1-16 Subsection Heading:

“Construction Impacts **and Mitigation**”

Page 7.1-17, second full paragraph:

...and the potential for special-**status species** animals...

Page 7.1-18, first paragraph:

...we find the potential impacts of the AEC project on special-**status** species during construction...

Page 7.1-35, insert after comments by Keith Simmons

**Also, in comments on the PMPD, the Sierra Club, California Coastal Protection Network, 350.org, Coastal Environmental Rights Foundation, Los Angeles Waterkeeper, Surfrider Foundation, Earth Law Center, Heal the Bay, and Protect Our Communities<sup>3</sup> assert that the PMPD failed to account for adverse impacts to nearby coastal wetlands.**

Page 7.1-36. Finding number 11:

...the potential impacts of the Alamitos Energy center on special-status **species** during construction...

#### **SOIL AND WATER RESOURCES**

Page 7.2-8, first paragraph, first sentence:

Condition of Certification **SOIL&WATER-4** requires the Applicant to obtain an industrial permit for project operation from the LARWQCB, prior to ~~beginning construction~~ **the start of commercial operations.**

Page 7.2-8, third paragraph, fourth sentence:

**AGS has chosen** ~~The termination~~ **cessation** of AGS' **its** once through cooling by **December 31, 2020** ~~is required under~~ **to comply with** the State Water Resources Control Board's once through cooling policy (SWRCB Resolution 2010-0020) and section 316(b) of the Clean Water Act...

Page 7.2-9, last paragraph:

To ensure that project water use is within the projected volumes as analyzed in the evidentiary record, we impose Conditions of Certification **SOIL&WATER-6** and **SOIL&WATER-7**, which limit potable water use for domestic **(including landscaping)** and process use to ~~1.6 AFY and 130 AFY, respectively,~~ and require the project owner to meter and report facility water use in compliance reports.

Page 7.2-21. Finding number 18:

18. Condition of Certification **SOIL&WATER-4**, requires the Applicant to obtain an industrial permit for project operation from the Los Angeles Regional Water Quality Control Board, prior to ~~beginning construction~~ **the start of commercial operations.**

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<sup>3</sup> **TN 216544.**

## CULTURAL RESOURCES

Page 7.3-1, first paragraph, third sentence:

Places that are important to Native Americans or other ethnic groups are considered valuable cultural resources. ~~Federal and s~~State laws require a ~~project developer~~ **lead agency, or its delegatee**, to **develop and** implement mitigation measures to minimize potential adverse impacts to significant cultural resources.

Page 7.3-1, fourth paragraph, second sentence:

For ethnographic resources, Staff identified one ethnographic resource in the **ethnographic PAA** area: the Puvugna Ceremonial Site Complex (PCSC) ~~at 6400 Bixby Hill Road.~~

Page 7.3-3:

**Cultural Resources Figure 1** changed to conform to Exhibit 1041.

Page 7.3-3:

Add to the citations for **Cultural Resources Figures 2 and 3**:

**Note that the Construction Access Road was eliminated from the project as shown in Exhibit 1041, p. 3.**

Page 7.3-4, second paragraph, third sentence:

When a cultural resource is determined to be significant **(that is, a historical resource or unique archaeological resource)**, it is eligible for listing in the California Register of Historical Resources (CRHR) ~~and/or the National Register of Historic Places (NRHP)~~. An archaeological resource that does not qualify as a historical resource may be considered a “unique” archaeological resource under the California Environmental Quality Act (CEQA).

Page 7.3-4, second paragraph, second sentence:

The CHRIS files revealed that there had been ~~81 80~~ previous cultural resource studies conducted in the project area and that ~~98 88~~ previously recorded resources had been identified within the 1-mile buffer surrounding the AEC project site.

Page 7.3-7, last paragraph, second sentence:

Deep piles will intersect as many as five low-energy strata (including ~~the~~ **a buried land surface paleosol**).

Page 7.3-9, second full paragraph:

The following federal, state, and local laws and policies apply to the protection of **human remains** ~~public health~~ and **grave goods** ~~hazardous materials management~~. The record examines the project’s compliance with these requirements.

Page 7.3-10:

Capitalize the word “Nation” in all four references to the Gabrielino Tongva Nation.

Page 7.3-11, Finding of Fact number 2:

2. Archival research at the South Central Coastal Information Center of the California Historical Resources Information System revealed that although ~~898~~ previously recorded resources had been identified within the one mile buffer surrounding the Alamitos Energy Center project site, none of these archaeological resources has ve been found in the archaeological component of the project area of analysis.

GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

Page 7.4-11, second full paragraph, second sentence:

Based on the evidence ~~data from the Desalinization Project geotechnical report~~, the likelihood of such geologic hazards to occur at the project site is considered low...

LAND USE

Page 8.1-3, delete third bullet point:

- ~~PD-1, Subarea 22(b) (wastewater pipeline): Land uses are designated residential with accommodations for a golf course.~~

Page 8.1-4, footnote 10:

Source: Ex. 1416, Land Use Figure 5.6-2. (Note that the sewer line extends no further than E. Vista Street, near the Long Beach Bikeway Route 10 as shown in Exhibit 1041, p. 3).

Page 8.1-5, footnote 11:

Source: Ex. 1416, Land Use Figure 5.6-3. (Note that the sewer line extends no further than E. Vista Street, near the Long Beach Bikeway Route 10 as shown in Exhibit 1041, p. 3).

Page 8.1-13, LORS Table, delete bottom row:

APPLICABLE LORS	DESCRIPTION OF LORS	DISCUSSION/CONCLUSIONS
SEADIP, Subarea 22(b)	<del>Land uses are designated residential with accommodations</del>	<u>Compliant.</u> The project would be consistent with the goals and

	for a golf course.	policies of Subarea 22(b) because no changes to the land use or zoning along the wastewater pipeline are proposed.
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TRAFFIC AND TRANSPORTATION

Page 8.2-2, footnote 3:

Ex. 2000, pp. 4.10-6 – 4.10-11

Page 8.2-6, first paragraph, last sentence:

A map of the The planned truck route is shown in Traffic and Transportation Figure 3 and is listed in Traffic and Transportation Table 1.

Page 8.2-6:

**Delete: Traffic & Transportation – Figure 3**

Page 8.2-7, footnote 5:

~~Id. Ex. 2000, p. 4.10-10~~

Page 8.2-9, footnote 12:

~~Ex. 2000, p. 4.10-98.~~

Page 8.2-25, footnote 50:

~~Ex. 2000, p. 4.10 – 30 *Id.*~~

Page 8.2-33, Finding of Fact number 11:

11. The project owner will comply with the California Department of Transportation and all other relevant jurisdictional requirements for oversized vehicles **as required by Condition of Certification TRANS-1.**

Page 8.2-33, Finding of Fact number 12:

12. The project owner will repair any damage to roads, easements and public rights-of-way affected by construction activity **as required by Condition of Certification TRANS-3.**

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Page 8.3-14 – 8.3-15, LORS Table, third column:

APPLICABLE LORS	DESCRIPTION OF LORS	DISCUSSION/CONCLUSIONS
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APPLICABLE LORS	DESCRIPTION OF LORS	DISCUSSION/CONCLUSIONS
<b>STATE</b>		
California Education Code, Section 17620	The governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement for the purpose of funding the construction or reconstruction of school facilities.	<b>Compliant.</b> School fees are applied to the new construction or reconstruction of existing building for industrial use. The fees are assessed on the area of covered and enclosed space and are calculated prior to the issuance of building permits during plan review. The AEC site is located within the Long Beach Unified School District (LBUSD). The rate for the 2015-2016 fiscal year for new or commercial or industrial development for the LBUSD is \$0.54- <del>6</del> per square foot of covered and enclosed, non-residential space. Based on the preliminary project design, approximately 5,000 square feet of the administration building, 5250 square feet of the water treatment building, and 6,000 square feet of the warehouse will be subject to assessment. Based on this estimate, approximately <del>\$8,775</del> <b>9,100</b> in school fees will be assessed for LBUSD. Condition of Certification <b>SOCIO-1</b> ensures the payment of fees to the Long Beach Unified School District. AEC will comply with Section 17620 of the Education Code through the one-time payment of statutory school impact fees to the LBUSD.. <sup>4</sup>

Page 8.3-17, **Socioeconomics Table 6**, second column:

<b>TOTAL FISCAL BENEFITS</b>	
Estimated annual property taxes	Increase in property taxes - \$7.9 million to \$9.8 million
<b>State and local sales taxes:</b>	
Construction	\$11.9 million total, \$992,124 local
Operation	\$748,080 total, \$187,020 local
School Impact Fees	<del>\$8775</del> <b>9100</b>
Police Facilities Impact Fee	\$3542.50 ...

Page 8.3-19, Finding of Fact number 9:

The Alamitos Energy Center will have a construction payroll of approximately ~~\$54.6~~ **315.55** million.

Page 8.3-19, Finding of Fact number 11:

<sup>4</sup> Ex. 2000, p. 4.8-23.

The Alamitos Energy Center will generate **increased** annual property tax revenues of approximately \$7.9 – \$9.8 million.

NOISE AND VIBRATION

Page 8.4-5, first paragraph, fourth sentence:

~~Potentially excessive noise levels caused by nighttime concrete pours need to be mitigated by anticipating and controlling noise. To that end, we impose Condition of Certification **NOISE-9** which ensures that noise will not to exceed the nighttime ambient levels by more than 5 dBA at M1, M2, and M3.~~

Page 8.4-6, third paragraph:

As shown in **Noise and Vibration Table 3** below, this silenced steam blow would amount to a range of 56-61 dBA at M1 through M3 with a 2-6 dBA increase over the existing ambient levels at these locations. ~~Since the increase will be less than 5 dBA, therefore,~~ steam blow activity would be less than significant.

Page 8.4-17, LORS Table, second row, third column:

APPLICABLE LORS	DESCRIPTION OF LORS	DISCUSSION/CONCLUSIONS
City of Long Beach Municipal Code – Noise Ordinance, Title 8: Health and Safety, Chapter 8.80. 150 Exterior noise limits – Sound levels by receiving land use district	The following noise standards for the...	<b>Compliant.</b> If the measured ambient level exceeds what is permissible within any of the first four noise limit categories in Subsection B of Section 8.80.150 of the City of Long Beach Municipal Code, the allowable noise exposure standard shall be increased in five dBA increments in each category as appropriate to encompass or reflect the ambient noise level. The applicable noise limits are provided in <b>Noise and Vibration Table 3</b> above. As shown in <b>Noise and Vibration Table 4-5</b> , the modeled plant operating noise levels would comply with the respective LORS noise limits at all receptors...

Page 8.4-19, LORS Table, first row, third column:

APPLICABLE LORS	DESCRIPTION OF LORS	DISCUSSION/CONCLUSIONS
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City of Long Beach Municipal Code – Noise Ordinance, Title 8: Health and Safety, Chapter 8.80.160 Exterior noise limits – Correction factor for character of sound	In the event that alleged offensive noise contains...	<b>Compliant.</b> As shown in <b>Noise and Vibration Table -4-5</b> , the modeled plant operating noise levels comply...
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Page 8.4-21: delete Finding of Fact number 10.

**VISUAL RESOURCES**

Page 8.5-19, third full paragraph, fourth sentence:

From most KOPs, the AEC project will not substantially degrade the existing visual character of the project site and its surroundings; therefore, the AEC project will have a less than significant impact relative to this criterion. At KOP ~~-4-3~~, we find that the visual impacts are less than significant with mitigation incorporated in Condition of Certification **VIS-2**.

**CONDITIONS OF CERTIFICATION – APPENDIX A**

Page 44, Delete Condition of Certification **GHG-1**:

**GHG-1 DELETED**

Pages 45-46, Air Quality Table 55, delete the row beginning E73.2 and insert the following rows:

SCAQMD Permit Conditions	Energy Commission Condition of Certification	Condition Description
<b>Combined-Cycle Gas Turbine Generators</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>Simple-Cycle Turbines</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>Auxiliary Boiler</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>SCR/CO Catalyst for Combined-cycle</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>SCR/CO Catalyst for Simple</b>		

SCAQMD Permit Conditions	Energy Commission Condition of Certification	Condition Description
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>SCR for the Auxiliary Boiler</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>Ammonia Storage Tanks</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).
<b>Oil Water Separator</b>		
<del>E73-24.1</del>	AQ-E14	Requires the BACT/LAER determination to be reviewed prior to the commencement of Phase II construction (simple-cycle).

Page 51, Condition of Certification **AQ-SC1**:

**AQ-SC1** Air Quality Construction/Demolition Mitigation Manager (AQCMM):

The project owner shall designate and ~~retain an~~ **have** on-site **during construction/demolition activities an** AQCMM who shall be responsible for directing and documenting compliance with **AQ-SC3, AQ-SC4, and AQ-SC5** for the entire project site and linear facility construction/demolition. **The project owner may elect to assign one or more alternate AQCMM as well.** The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities, and shall have the authority to stop any or all construction/demolition activities as warranted by applicable construction/demolition mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. ~~The AQCMM may be replaced, only after compliance with the selection process outlined below.~~

**Verification:** At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval, the name, resume, qualifications, and contact information for the **first** on-site AQCMM **to be assigned** and all AQCMM Delegates. The AQCMM and all Delegates must be approved by the CPM before the start of ground disturbance. ~~In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent AQCMM is proposed to the CPM for consideration.~~ **An AQCMM could be replaced after ground disturbance if the replacement AQCMM has been approved by the CPM.**

Page 59, Equipment Table, The table listings for Simple Gas Turbine 4 (SCGT-4):

<b>Simple Gas Turbine 4 (SCGT-4)</b>	
D203	SCGT-44 General Electric Model LMS-100PB, natural gas simple-cycle, 100.438 MW at 59 degrees Fahrenheit
C205	SCGT-44 CO Oxidation Catalyst
C206	SCGT-44 Selective Catalytic Reduction with aqueous ammonia
S208	SCGT-44 Turbine Stack, height of 80 feet and diameter of 13.5 feet

Page 67, Condition of Certification **AQ-A2**:

<b>Contaminant</b>	<b>Range</b>	<b>Emissions Limit</b>
<b>Monthly Pounds in Any Calendar Month (lbs/month)</b>		
CO	Less than or equal to	8,594 lbs/month
VOC	Less than or equal to	1,973 lbs/month
PM10	Less than or equal to	4,638 lbs/month
SOx	Less than or equal to	1,207 lbs/month
<b>Annual Pounds in Any One Year (lbs/year)</b>		
CO	Less than or equal to	29,730 (lbs./year)
VOC	Less than or equal to	<del>7,500</del> <b>7,510</b> (lbs./year)
PM10	Less than or equal to	14,695 (lbs./year)
SOx	Less than or equal to	1,275 (lbs./year)

Page 73, Condition of Certification **AQ-A17**:

c = change in measured NOx across the SCR (ppmvd at ~~15~~**3**% O2)...

Page 77, Condition of Certification **AQ-C5**:

**AQ-C5** The project owner shall limit the number of start-ups to no more than 10 in any one calendar month.

The number of cold startups shall not exceed 2 in any calendar month, the number of warm startups shall not exceed 4 in any calendar month, and the number of hot starts shall not exceed 4 in any calendar month, with no more than 1 startup in any one day.

The number of cold startups shall not exceed 24 in any calendar year, the number of warm startups shall not exceed 48 in any calendar year, and the number of hot startups shall not exceed 48 in any calendar year.

For the purposes of this condition, a cold startup is defined as a startup which occurs after the ~~combustion turbine~~ **auxiliary boiler** has been shut down for 48 hours or more. A cold startup shall not exceed 170 minutes. The NOx emissions from a cold startup shall not exceed 4.22 lbs.

For the purposes of this condition, a warm startup is defined as a startup which occurs after the ~~combustion turbine~~ **auxiliary boiler** has been shut down 10 hours or more but less than 48 hours. A warm startup shall not exceed 85 minutes. The NOx emissions from a warm startup shall not exceed 2.11 lbs.

For the purposes of this condition, a hot startup is defined as a startup which occurs after the ~~steam combustion turbine~~ **auxiliary boiler** has been

shut down for less than 10 hours. A hot startup shall not exceed 25 minutes. The NOx emissions from a hot startup shall not exceed 0.62 lbs.

Page 93, Condition of Certification **AQ-E4**, fifth paragraph:

The project owner shall **provide the SCAQMD with written notification of the initial startup date. The project owner shall** maintain records **in a manner approved by the SCAQMD** to demonstrate compliance with this condition and **the records** shall ~~make such records~~ **be made** available to ~~the Executive Officer~~ **SCAQMD personnel** upon request. ~~The records shall be maintained for a minimum of 5 years in a manner approved by SCAQMD.~~ The records shall include, but not be limited to, the total number of commissioning hours, number of commissioning hours without control, and natural gas fuel usage.

PDF Page 608<sup>5</sup> Condition of Certification **BIO-8**: Pre-construction nest surveys shall be conducted if construction or demolition activities on the project site or wastewater pipeline will occur ~~from~~ **between** January 1 through August 31. In addition, **pre-construction** burrowing owl surveys shall be conducted prior to any ground disturbing activity year-round.

PDF Page 612, Condition of Certification **SOIL&WATER-1**, Verification, first sentence:

**Verification: At least** 30 days prior to site mobilization, the project owner shall submit the construction SWPPP to the delegate chief building official (CBO) and compliance project manager (CPM) for review and the SWRCB for review and approval...

PDF Page 612, Condition of Certification **SOIL&WATER-2**, Verification, first sentence:

**Verification: At least** 30 days prior to the first scheduled hydrostatic testing event, the project owner shall submit to the CPM documentation that all necessary NPDES permits were obtained from the Los Angeles RWQCB or State Water Board...

PDF Page 613, Condition of Certification **SOIL&WATER-4**, Verification:

**Verification: At least 30 days prior** Prior to the start of commercial operations, the project owner shall submit to the CPM documentation that all necessary NPDES permits were obtained from the Los Angeles RWQCB or State Water Board. **At least** 30 days prior to the start of commercial operations, the project owner shall submit to the CPM a copy of the city of Long Beach sewer connection permit for industrial waste discharge.

PDF Page 614, Condition of Certification **SOIL&WATER-5**, Verification:

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<sup>5</sup> Due to a pagination error from pages 118 to 159, we use the PDF pagination of the docketed version at <https://efiling.energy.ca.gov/getdocument.aspx?tn=215975>

**Verification:** At least 30 days prior to the scheduled connection to the city's sewer and water supply system, the project owner shall submit to the CPM a copy of the application to the city to connect to the sewer and water supply system and the check submitted to pay the fees described above.

PDF Page 614, Condition of Certification **SOIL&WATER-6:**

Water supply for project construction, sanitary, and industrial uses during project construction and operation shall be potable water supplied by the city of Long Beach Water Department (LBWD). Water use for project operation, including **landscaping and** ~~4.6 AFY~~ for sanitary purposes, shall not exceed 130 AFY. Water use for construction shall not exceed 22 AFY during the 56-month demolition and construction period. A monthly summary of water use shall be submitted to the CPM.

**Verification:** The project owner shall submit a water use summary report to the CPM monthly during construction and annually during operations for the life of the project. The annual report shall include calculated monthly range, monthly average, daily maximum within each month and annual use by the project in both gallons per minute and acre-feet. After the first year and for subsequent years, this information shall also include the yearly range and yearly average potable water used by the project. **No later than 60 days prior to construction, the project owner shall submit to the CPM two copies of the executed agreement for the supply and onsite use of potable water from LBWD.**

PDF Page 614, Condition of Certification **SOIL&WATER-7:**

Prior to the use of potable water, the project owner shall install and maintain metering devices as part of the water supply and distribution system. The project shall monitor and record in gallons per day the total volume of potable water from LBWD. Those metering devices shall be operational for the life of the project ~~and must be able to record the volume of construction, domestic and process water use separately.~~

Page 164, Condition of Certification **PAL-3:**

8. Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meet the Society of Vertebrate Paleontology's standards and requirements for the curation of paleontological resources;
- ~~89.~~ Identification of the institution that has agreed to receive data and fossil materials collected, requirements or specifications for materials delivered for curation, and how they will be met, and the

name and phone number of the contact person at the institution;  
and

9. ~~\_\_\_\_\_~~ Aa copy of the paleontological resources conditions of certification.

Page 175, Condition of Certification **TRANS-8**:

1. Submit a letter to the Federal Aviation Administration (FAA) requesting a Notice to Airmen (NOTAM) be issued advising pilots of the location of the power plant and recommending avoidance of overflight of the project site. The letter should also request that the NOTAM be maintained in active status ~~until status~~ until all navigational charts and Airport Facility Directories (AFDs) have been updated.

Page 179, Condition of Certification **NOISE-4**, second paragraph, add footnote:

No new pure-tone components (as defined in Noise Table A1\*, ~~bottom row defining pure tone~~)...

\*A pure tone is defined by the Model Community Noise Control Ordinance as existing if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the two contiguous bands by 5 decibels (dB) for center frequencies of 500 Hz and above, or by 8 dB for center frequencies between 160 Hz and 400 Hz, or by 15 dB for center frequencies less than or equal to 125 Hz. (Ex. 2000 [FSA TN213768], pp.4.6-44 – 4.6-45).

Page 185, Condition of Certification **VIS-1, Verification**:

Remove the third, fourth, and fifth bullets.

#### EXHIBIT LIST - APPENDIX B

As explained in the February 16, 2017 Memo re: PMPD's Exhibit List (TN 216071) the Exhibit List attached to the PMPD inadvertently omitted all even-numbered pages of the Exhibit List. A complete Exhibit List was attached to the memo and will be attached to the Final Decision.

Dated: April 10, 2017, at Sacramento, California.

Original signed by \_\_\_\_\_  
KAREN DOUGLAS  
Commissioner and Presiding Member  
Alamitos Energy Center AFC Committee

Original signed by \_\_\_\_\_  
JANEA A. SCOTT  
Commissioner and Associate Member  
Alamitos Energy Center AFC Committee