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# Alamitos Energy Center

(13-AFC-01)

# Data Responses, Set 2

## (Responses to Data Requests 64 to 68)

Submitted to

California Energy Commission

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# Contents

# Introduction

Attached are AES Southland Development, LLC's (AES or the Applicant) responses to the California Energy Commission (CEC) Data Request, Set 2 regarding the Alamitos Energy Center (AEC) (13-AFC-01) Application for Certification (AFC). This submittal includes a response to data requests 64 through 68.

The responses are grouped by individual discipline or topic area. Within each discipline area, 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 28 would be numbered Table DR28-1. The first figure used in response to Data Request 28 would be Figure DR28-1, and so on. Figures or tables from the AEC 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.

# Land Use (64)

## BACKGROUND: LAND USE

While preparing a list of projects to include in a cumulative impacts analysis for the Preliminary Staff Assessment (PSA) for the AEC, staff learned that AES has filed a permit application with the City of Long Beach for a power storage facility adjacent to the AEC project site. From what staff understands, the proposed project is a building (approximately 283,000 gross square feet) that would house a power storage facility using batteries. So that staff can provide accurate information in the PSA and consider the project along with other projects in the cumulative impacts analysis, please provide the following.

## DATA REQUEST

64. Please provide the project name, project description, specific project location, current status, process under which the project is being reviewed/permitted and estimated dates and duration of construction.

**Response:** An affiliate of the Applicant (AES Energy Storage) submitted a conditional use permit application to the City of Long Beach in February 2014 for a 300-megawatt energy storage warehouse. As proposed, the energy storage warehouse would be located in the northern section of the Alamitos Generating Station site, in the parking lot to the west of the current administration building.

The energy storage warehouse is a conceptual, alternate use of a portion of the Alamitos Generating Station site by an affiliated company. Given recent policy initiatives to foster energy storage, the lengthy certification process, and the uncertainty associated with Southern California energy markets, among other factors, it is a reasonable and prudent business decision by the parent company to explore all feasible uses of the Alamitos site.

It is important to note that the energy storage warehouse alternative could not and would not proceed if the proposed Alamitos Energy Center is approved and built. Energy storage and thermal generation primarily built for providing local area capacity do not serve the same purpose for electrical reliability. Construction of AEC would use the entire property. Moreover, the interconnection capacity available could not support both the proposed AEC project and the energy storage warehouse. Therefore, the energy storage warehouse is not a cumulative project for AEC as there is no possibility that both projects would be built.

# Traffic and Transportation and Worker Safety / Fire Protection (65–68)

## BACKGROUND

The project, as currently proposed, has only one ingress/egress road for site access. This one access point (the main gate off of Studebaker Road) will be the only point where all vehicles and equipment of all sizes and type planned to be used for demolition, construction, and operations will travel through when entering or leaving the site. Since at least one of the laydown areas being proposed is at the southern end of the site, movement from the main gate at the northern end to the southern laydown area will necessarily have to go through the project site.

Staff has several questions about the level of traffic and movement of cars, trucks, heavy construction and demolition equipment, and hazardous materials tankers and trucks through the site during the 10-year period where demolition and construction will occur simultaneously at an active power plant. The site is unique in that it is restricted by the surrounding environment of roads and waterways and thus does not have the ability to expand beyond its present boundaries in order to provide an easy and safe flow of vehicles into, through, or around the site. Access to laydown areas at other power plant construction sites are usually direct from a road; travel though an active power plant site is not usually required. Additionally, the paved paths though this site are not straight but instead jog at regular intervals to avoid existing structures or water inlets and the turns are tight. Staff has concern as to how large trucks carrying large equipment (e.g., turbines) will make their way through the site. Staff is also unclear about exactly where all construction laydown areas will be located, the access into and out of those laydown areas, the use of those laydown areas for storage (however temporary) of construction equipment and materials for the Huntington Beach Energy Project (HBEP), and how the flow of equipment and vehicles will be arranged and controlled throughout the project site.

Staff is concerned with the high volume of oversize truck trips generated by HBEP construction through the operational Alamitos Generating Station (AGS) site. The HBEP applicant's responses to staff data requests indicated that during the demolition and construction period for HBEP, approximately 112 oversize trips would occur from the laydown area at AGS to the HBEP site. (HBEP 2012a- Stoel Rives LLP (tn 68366), Huntington Beach Energy Project (12-AFC-02) Applicant's Responses to Staff's Data Requests, Set 1A (#1-72), November 2012.)

The movement and volume of vehicles and equipment through the project site may result in an unsafe and even dangerous work environment as well as impact the ability of emergency response vehicles to traverse the paved interior roads of the site rapidly and safely during this extended 10-year period. An active power plant should have clear and unfettered access to all locations for the workers and having to "dodge" numerous trucks and heavy equipment on a daily basis raises the risk of collisions and other accidents. This places all workers at an increased risk of injury.

Therefore, staff needs additional information on the construction parking and laydown areas, their locations, uses, duration of use, and travel routes to and from these areas, routes through the entire site, and alternative routes into, out of, and through the site in order to be able to complete its assessment of the potential for impacts to on-site worker safety and emergency response and off-site traffic and transportation. A second access devoted to emergency response vehicles should be required and staff would like to explore the use of that second access point during demolition and construction to reduce at least some of the traffic that will flow through the entire site from the main gate in the north to the south laydown area. Staff wishes to explore the possibility of providing a second access at the southern end which would allow direct access to the south laydown area.

Additionally, the proposed route for the delivery of hazardous materials during the construction period goes right by the Rosie the Riveter Charter School, an active trade school onsite. The Energy Commission has in the past, at several power plant sites, required the use of alternative routes—for the transportation of bulk liquid or gaseous hazardous materials—that do not travel by schools, hospitals, or other similar sensitive receptor locations. If that is not possible due to other factors (e.g., lack of other roads in a remote area), the Energy Commission has required time-of-day restrictions on deliveries to avoid times when school is in session or when school buses are coming or going. The Energy Commission has also required in certain circumstances when weather is a factor (e.g., heavy fog conditions) escort vehicles or a prohibition of delivery during those weather conditions. Because staff is aware that the school also operates after-hours and thus time-of-day scheduling may prove to be problematic, staff would prefer to have deliveries of bulk liquid hazardous materials occur via a different access point. And if this were accomplished, staff would recommend that all hazardous materials deliveries use that second access point so as to remove any possibility that any hazardous materials spill near the school would impact the students and teachers. (Staff has modeled a potential accident and resultant spill of 19% aqueous ammonia from a tanker while making a turn from Studebaker Road into the main gate and found that the Energy Commission's level of concern of 75 ppm ammonia would indeed be exceeded at the school.)

## DATA REQUEST

65. Please provide a discussion and map of all planned construction parking and laydown areas, their locations, uses, duration of use, alternative routes to and from these areas, and alternative routes through the entire site.

**Response:** The construction parking and laydown areas are clearly shown on the Application for Certification's Section 2.0, Project Description, Figure 2.1-1. The northern construction parking and laydown areas will be used solely for staging/laydown for AEC construction, whereas the adjacent laydown area, located in the southern portion of the site (see Figure 2.1-1) may under certain limited circumstances described in response to DR66 below be shared with another project being developed by the Applicant (Huntington Beach Energy Project [HBEP] 12-AFC-02). These construction parking and laydown areas will be used throughout AEC construction and demolition of the existing Alamitos Generating Station units.

Major maintenance events at the existing Alamitos Generating Station require a significant onsite workforce and delivery of equipment and materials to support these maintenance events. Plant personnel are well-trained and adept at recognizing workplace hazards and receive daily briefings to communicate ongoing construction work onsite as well as measures to implement to ensure a safe work environment. Equipment and materials will be delivered to AEC via the existing entrance on Studebaker Road and will travel to the appropriate laydown area using the same onsite roads that are used to transport equipment and materials required during major maintenance events. The existing site has a 15-mile-per-hour speed limit that is strictly enforced and delivery vehicles will conform to industry standards for the safe movement of vehicles on an active construction site. Existing access roads onsite frequently accommodate large trucks carrying large equipment including enough space to accommodate turning radius.

## DATA REQUEST

66. Please identify potential alternate routes for any deliveries to the designated laydown area south of the AEC site (including those deliveries designated for the HBEP or any hazardous materials that will be used at the AEC during the construction/demolition period) which avoids the main AEC entrance on Studebaker Road and discuss their feasibility.

**Response:** The adjacent laydown area will be primarily used to store oversized equipment for the construction of AEC Block 3 and the HBEP. The Applicant's responses to staff's Huntington Beach Energy

Project (HBEP) Data Requests (Transaction Number 68366) noted that a total of 112 heavy or oversized truck trips would deliver equipment. However, these 112 heavy or oversized truck trips represent all heavy/oversized truck trips required for HBEP, and not those heavy or oversized truck deliveries intended for storage at the adjacent laydown area.

Instead, the only HBEP heavy or oversized truck deliveries that might use the southern laydown area at AEC are those heavy or oversized truck deliveries that originate from the Port of Long Beach. All other heavy or oversized truck deliveries could be timed to arrive at the HBEP site as needed, avoiding the added time and expense of having to move those materials twice.

Of those materials that are expected to use the Port of Long Beach, the Applicant's first preference would be to handle and move those materials once, directly from the Port to HBEP. In the event that the HBEP was not ready to receive the heavy or oversized truck deliveries from the Port of Long Beach, then—and only then—would heavy or oversized truck deliveries for HBEP be temporarily diverted to the ACE site for temporary storage.

In terms of heavy or oversized truck deliveries that could originate from the Port of Long Beach, there would be only 24 heavy or oversized truck deliveries that could possibly be sent to AEC. Those 24 possible heavy or oversized truck deliveries consist primarily of the combustion turbines, steam turbines, and transformers. It is important to note that it is possible that none of these 24 heavy or oversized truck deliveries may end up at AEC. If the HBEP is ready to receive heavy or oversized truck deliveries from the Port of Long Beach, the materials will be sent directly to HBEP, avoiding the time and expense associated with double-handling of those materials. HBEP will of course endeavor to time shipments through the Port of Long Beach to avoid early or late delivery. However, should materials arrive too soon for placement at HBEP then and only then would one or more of the 24 total trips be diverted to AEC for temporary storage until needed at the HBEP site.

As noted in the HBEP Data Request response, equipment deliveries transported to/from the adjacent AEC laydown area are expected to occur during the hours of 10:00 p.m. to 4:00 a.m. with no more than three deliveries per night. AEC construction staff will be minimal during these hours (beyond those needed to direct the deliveries to an overnight parking location). This delivery strategy is consistent with the Long Beach Noise ordinance that prohibits noisy construction activities (which annoy or disturb a reasonable person of normal sensitivity) between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and federal holidays, between 7:00 p.m. Friday to 9:00 a.m. on Saturdays, or anytime on Sundays.

## DATA REQUEST

67. Please identify the potential and feasibility for a new signalized intersection on Westminster Blvd west of the San Gabriel River along the Plains American Tank Farm property. Please also discuss if additional roadway improvements may be necessary (i.e. left turn pocket eastbound on Westminster Blvd.) as part of the City of Long Beach Public Works Standard Plans.

**Response:** The access road proposed in the Background is located on property not owned by the Applicant and would require the purchase or lease of additional property. Given the Applicant's experience conducting major maintenance at the existing site, an alternative access road is not warranted to ensure worker safety or fire protection. Furthermore, past maintenance events have not resulted in disruption of the onsite charter school. Staff Data Request 67 asks the Applicant to discuss the potential and feasibility for a new signalized intersection on Westminster Boulevard west of the San Gabriel River along the Plains American Tank Farm property. The Applicant is not aware of any plans by the City of Long Beach to install a signalized intersection at that location. Whether a new signalized intersection is needed at a particular location is evaluated based upon a properly performed engineering study of traffic conditions, pedestrian

characteristics, and physical characteristics of the location. As explained in the *California Manual for Uniform Traffic Control Devices*:

> The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:
>
> - Warrant 1, Eight-Hour Vehicular Volume
> - Warrant 2, Four-Hour Vehicular Volume
> - Warrant 3, Peak Hour
> - Warrant 4, Pedestrian Volume
> - Warrant 5, School Crossing
> - Warrant 6, Coordinated Signal System
> - Warrant 7, Crash Experience
> - Warrant 8, Roadway Network
> - Warrant 9, Intersection Near a Grade Crossing.

The *California Manual for Uniform Traffic Control Devices* further explains that the installation of a traffic signal can sometimes do more harm than good, stating:

- A traffic control signal should not be installed unless one or more of the factors described in this Chapter are met.
- A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.
- A traffic control signal should not be installed if it will seriously disrupt progressive traffic flow.

Given the lack of significant impacts to traffic and transportation from the AEC, the Staff's Data Request does not explain why a new signal at the proposed location would merit consideration. In the absence of such a showing, signalization at this location is neither necessary nor feasible.

## DATA REQUEST

68. Please discuss the feasibility of a revised Traffic Control Plan (TCP) that would require that all aqueous ammonia deliveries for the AEC project and all deliveries for the HBEP use I-405 (N) to Seal Beach (S) to Westminster Blvd (W), and then entering the Plains American Tank Farm laydown area via a new driveway constructed to City of Long Beach standards.

**Response:** The existing Alamitos Generating Station uses a 29 percent aqueous ammonia solution to control oxides of nitrogen emissions from the six operating units. This aqueous ammonia is delivered to the site through the existing gate. Considering AEC is proposing to use a 19 percent aqueous ammonia solution, it is difficult to see how the risk associated with the delivery of this less toxic form of ammonia is greater than the current baseline condition, which is proven to be safe, reliable, and protective of human health and the environment.

Data Request 68 asks the Applicant to "discuss the feasibility of a revised Traffic Control Plan (TCP) that would require that all aqueous ammonia deliveries for the AEC project and all deliveries for the HBEP" follow a specific route: "I-405 (N) to Seal Beach (S) to Westminster Blvd (W), and then entering the Plains American Tank Farm laydown area via a new driveway constructed to City of Long Beach standards."

Under current baseline conditions, Studebaker Road is being used for transportation of hazardous materials in this industrial section of Long Beach. There are currently no restrictions on the use of this road for deliveries of hazardous materials by the City of Long Beach or by Caltrans. All deliveries to the plant have been made via the existing main gate for over 50 years, without incident.

While the Energy Commission has in the past, at several power plant sites, required the use of alternative routes for the transportation of bulk liquid or gaseous hazardous materials, we are not aware of the Commission's authority to do so.

The transportation and permitting of goods on public roads is governed by the California Vehicle Code. The Commission has peremptory jurisdiction over the project site and related facilities. Transportation over off-site roads does not fall within the definitions of "site" or "related facilities." Accordingly, transportation over off-site public roads is not within the Commission's permit jurisdiction.

Moreover, under California law, the Project Owner is not required to obtain hazardous water permits or heavy haul permits for equipment or materials delivered to the project site by third parties. These permits are the responsibility of the third-party haulers who will make the delivery. These heavy haulers are also regulated by federal, state, and local regulatory programs. Thus, there is no "regulatory gap" to be filled by the Commission.

It would be a mistake for the Commission to require any specific route for delivery of hazardous materials. The most appropriate route at the time of delivery will depend on where the delivery will originate, the road conditions at the time of delivery, the possibility of temporary construction activities for other projects affecting the local jurisdictions' selection of route segments, and, generally, which routes will be designated as "best" at that time by the local jurisdictions based on the real world conditions as they will exist in the future at the time of scheduled delivery. None of these factors can be known with any degree of certainty today.

The Commission's decision should not be overly prescriptive and should not specifically designate a particular route because that route might not be feasible at a later date. If a specific route were required by the Commission's decision and that route later proved to be infeasible, even temporarily due to local conditions, it would potentially require an Amendment to the AFC license and a possible delay in the construction of the project.

Regulatory requirements for hazardous waste and heavy haul transportation are set forth in federal law, California law, including the California Vehicle Code, and the regulations of local jurisdictions. The Commission should not usurp the role of these agencies.

The Background to Staff's Data Request 68 also expresses concern that "the proposed route for the delivery of hazardous materials during the construction period goes right by the Rosie the Riveter Charter School, an active trade school onsite." The proposed route is the same access point (the main gate off of Studebaker Road) as that currently used by the Alamitos Generating Station, and which has been used for over 50 years for construction and operation of and deliveries for the existing plant without incident or concern.

The Applicant would welcome a continued dialogue on this issue. However, based on current information an alternative route for aqueous ammonia deliveries is neither necessary, feasible, or within the legal authority of the Commission to impose.

The Background also contains several statements (including incorrect assumptions) that must be addressed. For example, the Background states: "Access to laydown areas at other power plant construction sites are usually direct from a road; travel though an active power plant site is not usually required." This statement is true with respect to construction of new power plants on new sites. However, where construction is proposed at existing sites, travel through an active power plant is usually required. Construction at existing industrial facilities is not unusual or uncommon in any way.

The Background also expresses uncertainty regarding "how large trucks carrying large equipment (e.g., turbines) will make their way through the site…exactly where all construction laydown areas will be located, the access into and out of those laydown areas, the use of those laydown areas for storage… and how the flow of equipment and vehicles will be arranged and controlled throughout the project site." These types of issues—all of which involve onsite operations—are typically addressed at the time of construction and are not appropriate at this level of detail in the preliminary licensing of a project. Nevertheless, if Staff is concerned about these issues, the Applicant is available to discuss these issues with Staff.

The Background also states that "The movement and volume of vehicles and equipment through the project site may result in an unsafe and even dangerous work environment as well as impact the ability of emergency response vehicles to traverse the paved interior roads of the site rapidly and safely during this extended 10-year period." This statement is pure speculation and has no basis in fact. In the Background to the data request, Staff references the 112 oversized vehicle trips estimated for the HBEP. Assuming an equivalent number of deliveries for AEC, 112 deliveries over a 10-year span is, on average, less than one such vehicle per month. Such deliveries can easily be managed onsite, as they have been managed for over 50 years without incident. Speculation that workers will have to "dodge" "numerous" trucks and heavy equipment on a "daily basis" is unfounded.

The Background further states that "A second access devoted to emergency response vehicles should be required," but provides no factual foundation for such a requirement, other than the unfounded speculation of workers "dodging" trucks. The criteria for requiring secondary access to industrial sites is very clear under existing codes, and Staff has not shown that this project triggers these criteria.