

## CALIFORNIA ENERGY COMMISSION

516 NINTH STREET  
ACRAMENTO, CA 95814-5512

February 28, 2008

Tim Hemig  
Director, Environmental & New Business  
NRG Energy, Inc.  
1817 Aston Avenue, Suite 104  
Carlsbad, CA 92008

<b>DOCKET</b>	
<b>07-AFC-6</b>	
<b>DATE</b>	FEB 28 2008
<b>RECD.</b>	FEB 28 2008

Dear Mr. Hemig,

**CARLSBAD ENERGY CENTER PROJECT (07-AFC-6) DATA REQUEST, SET #2**

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests (#76-112) is being made in the areas of air quality, hazardous material management, socioeconomic, traffic and transportation, visual resources, and waste management. Written responses to the enclosed data requests are due to the Energy Commission staff on or before March 28, 2008, or a different date as may be mutually agreed. However, our hope is to receive your responses prior to the 30-day time allowance in order that all parties benefit from the forthcoming analysis prior to the planned March 26<sup>th</sup> Data Response and Issues Resolution Workshop #2. To permit staff and any other interested parties sufficient time to review the responses, if the responses are not received by March 17, 2008, we will consider a later date for the workshop.

If you are unable to provide the specific information requested, need additional time, or object to providing requested/specific information, please send a written notice to both Commissioner James Boyd, Presiding Committee Member for the Carlsbad Energy Center Project (CECP), and to me, within 20 days of receipt of this letter. If sent, this notification must contain the reason(s) for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

As always, if you have any questions, please call me at (916) 654-4894, or email at [mmonasmi@energy.state.ca.us](mailto:mmonasmi@energy.state.ca.us).

Sincerely,

Mike Monasmi  
Energy Facility Siting Project ManagerEnclosure  
cc: POSPROOF OF SERVICE (REVISED 2/5/08) FILED WITH  
ORIGINAL MAILED FROM SACRAMENTO ON 2/28/08

**Carlsbad Energy Center Project  
(07-AFC-6)  
Data Requests**

**Technical Area: Air Quality**

**Author: William Walters**

**BACKGROUND: OPERATIONS MITIGATION – EMISSION REDUCTIONS**

The applicant's response to first round Data Request #6 did not provide appropriate documentation to back up their assertions relating to a realistic emission baseline for the existing Encina Power Station (EPS) boiler Units 1 through 3. The applicant indicated that these three units, which will retire if the proposed project is built, will have increased use, above current use, if the proposed project is not built; and that increased use should be factored into the determination of appropriate baseline emissions. However, the Commission's Scenario Analysis of California's Electricity System performed for the 2007 IEPR shows significant decreases in the forecasted use of aged Encina (Carlsbad) and South Bay (Chula Vista) power plant boilers located in San Diego Gas & Electric territory. The scenario analysis documents are located at [http://www.energy.ca.gov/2007\\_energypolicy/documents/index.html](http://www.energy.ca.gov/2007_energypolicy/documents/index.html), and the generation forecast results for the SDG&E territory boilers are provided in the spreadsheet appendices <http://www.energy.ca.gov/2007publications/CEC-200-2007-010/appendices/> to the scenario analysis. Staff needs additional information to determine an appropriate emission baseline for EPS Units 1 through 3.

**DATA REQUESTS**

76. Please provide the annual capacity factor, based on fuel consumption, separately for EPS boiler Units 1, 2, and 3 for the years 2002 through 2007.
77. Please provide the annual emissions (NO<sub>x</sub>, CO, PM<sub>10</sub>, ROG, SO<sub>x</sub>) for EPS boiler Units 1, 2, and 3 for 2007.
78. Please provide the net MW-hrs of generation for EPS boiler Units 1, 2, and 3 for 2007.
79. Please provide information documenting a reputable source for the assertion that the operations of these units would increase over time if the proposed project were not built. Reputable sources would include site specific energy demand forecasts from California public agencies such as the California Independent System Operator (CAISO) or the California Public Utilities Commission (CPUC).

**BACKGROUND: CONSTRUCTION – WORST CASE IMPACTS**

The responses to first round Data Requests 10 and 11 did not provide information that demonstrated the worst-case, short-term construction impacts would occur during the activities and period (7 am to 4 pm) modeled. The applicant has noted the potential for a 24 hr/day construction schedule, but has not quantified associated potential emissions or impacts. During the January 24, 2008 data response and issues resolution workshop the applicant indicated a willingness to limit the activities that could occur during any necessary 24-hour construction periods. Additionally, during the data response

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workshop, the city of Carlsbad indicated that their noise regulations do not allow 24-hour construction activities. Staff needs more information to be able to assess potential worst-case impacts from 24-hour construction activities.

**DATA REQUEST**

80. Please describe the types of construction activities for which the applicant would be willing to stipulate that it could forgo a 24 hr/day schedule. This could be provided as a list of specified construction activities or specific heavy equipment activity, or can be provided as an applicant proposed condition of certification.
81. Please provide an estimate of the maximum hourly and 4 pm to 7 am period emissions associated with the requested 24-hour construction activities.
82. Please provide a modeling analysis of the maximum short-term (1, 8, and 24-hour) criteria pollutant (excepting SOx) impacts from the applicant's proposed 24-hour construction activities.
83. Please provide confirmation from the city of Carlsbad that the proposed 24-hour construction activities would be allowed under city of Carlsbad noise ordinances.

**BACKGROUND: CONSTRUCTION AND OPERATIONS MODELING**

The modeling analysis appears to use incorrect emission source elevations for both the construction and operating modeling analysis. The elevations used have not been adjusted for the man made depth of the project area, so the emission source elevations have been set 14 to 17 feet too high. Additionally there are other modeling issues that need to be revised/corrected to allow a complete staff analysis including: 1) correcting downwash parameters; 2) refining the construction NOx modeling; 3) completing the facility's cumulative NOx impact modeling analysis; and 4) correcting the gas turbine full load PM10 modeling analysis emission basis to 9.5 lbs/hour.

**DATA REQUEST**

84. Please correct the emission source elevations used for the construction and operations modeling, including confirming and revising as necessary the source elevations for the structures and berms used for building downwash.
85. Please revise the downwash dimensions for the berm in order to model it as a set of "structures" that surround the project area. This request can be alternatively fulfilled by a letter or an e-mail from an USEPA air dispersion modeling specialist that states that downwash method used for the berm is adequate for sources with release points located both above and below the top berm height.

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86. Please remodel the construction NOx emissions using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) NOx Ozone Limiting Method/Plume Volume Molar Ratio Method (OLM/PVMRM) as originally requested in first round Data Request 12.
87. Please provide a modeling analysis for facility cumulative NOx impacts to complete the response to first round Data Request 17.
88. Please correct the annual NOx, PM10 and PM2.5 emission inputs in the construction modeling files to match the annual emission values provided in the AFC.
89. Please correct the operations modeling to reflect the stipulated full load PM10 emission rate of 9.5 lbs/hour/gas turbine.
90. Please provide the revised construction and operation modeling (including initial commissioning and startup modeling) input and output files, in electronic format, that include all the modeling revisions/corrections requested in Data Requests 84 through 88 above.

**BACKGROUND: LOCAL DIRECT HEAT IMPACTS**

The public (i.e., members of the Carlsbad community) has requested that the local heat impacts from the project's operation, specifically the fin fan coolers, be analyzed. To perform this analysis, staff will need additional information from the applicant about the fin fan coolers.

**DATA REQUESTS**

91. Please provide the following information for the proposed project's two fin fan coolers:
  - a. Please confirm that the dimensions of the fin fan coolers that are provided in Table 5.13-2 of the AFC are correct.
  - b. Please provide the air flow rate and heat rejection for the fin fan coolers when operating at full load. This should include the maximum heat rejection case, but additional ambient cases can be provided, if desired. Please note that staff will, at the very least, be modeling a high ambient temperature case as part of the determination of localized heat impacts.
  - c. Please describe the physical area for the exhaust release "point(s)" of the fin fan coolers.

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**Technical Area: Hazardous Material Management**

**Author:** Dr. Alvin Greenberg

**BACKGROUND**

Pages 1-13, 5.5-17, and 5.5.18 of the AFC provide a narrative discussion of the hazardous materials proposed for use at the power plant during operations. Table 5.5-2 lists the location and use of these proposed hazardous materials. If the project is certified by the Commission, the project owner will be limited to using only those hazardous materials, strengths, and amounts listed on this table. Therefore, staff needs the specific identity, amount, strength, and Chemical Abstract Service (CAS) number of all hazardous materials proposed for use.

Staff also needs to clarify the proposed hazardous materials transportation route and if any hazardous materials will be transported via rail.

**DATA REQUESTS**

92. Please clarify if Table 5.5-2 represents all the hazardous materials to be used at the site. If there are others, please provide the specific identity, amount, strength, and CAS number of those hazardous materials.
93. Please clarify if any alternative fuel will be used or stored on-site, or transported to the site during commissioning or operations other than the previously identified natural gas and 200 gallons of diesel fuel.
94. With regard to the transportation of hazardous materials to the site, please provide an analysis of using the Avenida Encinas entrance off Cannon Road, rather than the Carlsbad Boulevard entrance.
95. Please clarify whether any hazardous materials would be delivered by rail.

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**Technical Area: Socioeconomics**

**Author: Vida Strong**

**BACKGROUND**

The applicant provided a 20-year financial projection for the City of Carlsbad in Round I Data Response 55. It appears that the applicant used a methodology for calculating the value of the property tax based on a projected value of capital construction. However, as a state-assessed property under the California Board of Equalization (BOE), the BOE uses an income approach after the second year of existence to value a power plant. Additionally, the proposed CECP is located in the Southern Carlsbad Coastal Redevelopment Area (SCCRA). Data Response 55 was silent in regards to the economic effect on the SCCRA.

**DATA REQUESTS**

96. Please recalculate the proposed economic impacts to the City using the Appropriate BOE methodology.
97. Please provide a 20-year economic analysis on the impacts to the SCCRA.

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**Technical Area: Traffic and Transportation**

**Author:** Jason Ricks & Somer Goulet M.S.E.L.

**BACKGROUND**

The AFC page 5.12-13 states only one train per day, at most, uses the tracks west of the CECP. However, staff has learned that Amtrak runs at least 12 roundtrips per day on these tracks. Additionally, staff learned that the Coaster runs on these tracks during weekday peak and midday periods, Friday evening, and Saturdays. Furthermore, the Coaster runs special evening service when the San Diego Padres baseball team play Monday – Thursday evening home games. Staff also found that Burlington Northern & Sante Fe (BNSF) sometimes runs freight trains at night on the track west of the CECP, mostly at night.

**DATA REQUEST**

98. Please explain how the conclusion “one train per day at most” was reached.
99. Please provide the number of daily trains that run on these tracks, including all BNSF freight trains, Amtrak trains, and Coaster trains.
100. Please explain how project-related train traffic will be coordinated to avoid conflicts with existing train traffic.

**BACKGROUND**

The AFC page 5.12-15 states that heavy equipment would be delivered to the CECP site using an existing rail spur that serves the Encina Power Station. However, the AFC does not discuss how many train deliveries would be made or how train deliveries may affect traffic flow on the local transportation system.

**DATA REQUEST**

101.
  - a. Please provide the number and frequency of train deliveries (per day/week/month) that would be required during construction of the CECP, as well as approximate times of such deliveries.
  - b. Please provide the same data as for 101a. above for train deliveries that would be required for CECP operation.
102. Please discuss how the increase in frequency of train deliveries to the project site would affect traffic flow on the local roadway system (especially Cannon Road), including frequency and duration of traffic delays due to rail crossing.

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**BACKGROUND**

The AFC page 5.12-10 states that the access point for CECP construction truck deliveries would be from Avenida Encinas at Cannon Road to avoid crossing the rail lines. However, according to the city of Carlsbad this would require construction trucks to cross a San Diego Gas & Electric (SDG&E) easement at the end of Avenida Encinas in order to access the CECP site.

**DATA REQUEST**

103. Please demonstrate through a formal written letter (or an email that could be docketed) from SDG&E that CECP construction traffic would be allowed to use SDG&E's easement for access into the CECP site.

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**Technical Area: Visual Resources**

**Author: William Kanemoto**

**BACKGROUND**

In order to assess the visual effects of the project, the city of Carlsbad has requested placement of story poles on site to facilitate a clearer understanding of the heights and configuration of the facility components, and to supplement the AFC visual simulations.

**DATA REQUEST**

104. Please erect story poles and/or balloons on the current property (between storage tanks 6 and 7) to indicate, to the extent feasible, the tops of the proposed exhaust stacks and corners of the HRSGs. The tops of the poles should be clearly marked with flags or inflatable balloons at their apex, in a bright color to be readily visible and photographable. Balloons should be of a bright color and/or marked with a flag to be readily visible.

**BACKGROUND**

Although staff recognizes that future effects of the Caltrans I-5 Widening project cannot be known with certainty at this time, and that those effects would receive environmental review under that project, concern remains about the potential for the future (cumulative) effects of that project to affect existing screening at the CECP site.

**DATA REQUEST**

105. In order to better understand the likelihood and extent of these cumulative impacts on the existing site screening, please provide an accurate overlay of the relevant portions of Computer Aided Design (CAD) layouts for the Caltrans I-5 Widening Alternatives 1, 2 and 3, over the CAD layout of the CECP site plan, including rectified aerial photograph background.

**BACKGROUND**

The city of Carlsbad has requested an (arborist's) assessment of health and probable longevity of existing trees bounding the CECP site, and the applicant responded by commissioning an appropriate study. The study's conclusion included a recommendation for the removal of several dead trees; their replacement, and the planting of additional trees in key areas on the north, west and south sides of the power plant property to augment existing vegetation and lower CECP's visual impacts.

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**DATA REQUEST**

106. Please develop an appropriate and complete tree replacement and addition plan that reflects the arborist's recommendations following his assessment of existing trees surrounding the project site.

**BACKGROUND**

The AFC several times refers to a proposed landscape plan as the means by which several local LORS requirements and Energy Commission standards will be met by the applicant following CECP's construction.

**DATA REQUEST**

107. Please provide a comprehensive conceptual landscape plan and narrative that more fully depicts and explains the applicant's intentions in regard to landscaping for the CECP. Please provide:
- a. specific examples of tree and vegetation types proposed for different areas, their number, container sizes and growth rates
  - b. irrigation system planned, type and source of irrigation water
  - c. number of proposed staff for maintenance.
108. Please clarify the extent to which the proposed spoil berms on the site's western boundary can be planted for screening purposes. In your response, please address the following items:
- a. Whether planting the berm constrains the location of the proposed transmission line, and if so, in what ways.
  - b. Whether there are portions of the berms that are *not* constrained by the transmission line.

**BACKGROUND**

Applicant's Data Response 1A Figure DR 68-1 describes a proposed 800-linear foot retaining wall, up to 12 feet in height, along the eastern side of the railroad right-of-way.

**DATA REQUEST**

- 109.
- a. Please provide available information on the referenced wall, including the project for which the proposed wall is included.
  - b., Please discuss the potential effect of wall construction on existing trees and other existing landscape screening east of the railroad tracks.

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**BACKGROUND**

Applicant's City Figure DR 60-2, Conceptual Operation Lighting Plan, depicts several air traffic signal lights, including several on the site's western boundary, several within the Encina Power Station site, as well as within the proposed power plant area.

**DATA REQUEST**

110. Please describe these lights, including brightness, height and other detail (e.g. hoods, shields) and provide elevation drawings of proposed light poles.

**BACKGROUND**

It appears possible that some taller portions of the proposed CECP, including the exhaust stacks, transmission poles and possibly the spoil berm and HRSGs, would be visible from Carlsbad Boulevard and the adjoining sidewalk. In order to evaluate the potential visibility and prominence of the project from this viewpoint (i.e., a new Key Observation Point), the city has requested that an additional visual simulation be prepared from Carlsbad Boulevard in the vicinity of the EPS outfall, looking eastward toward the proposed power plant.

**DATA REQUEST**

111. Please provide a visual simulation of the project at life size scale from the viewpoint described above.

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**Technical Area: Waste Management**

**Author:** Ellie Townsend-Hough

**BACKGROUND**

In responding to Data Request #73, applicant provided staff with copies of the Phase II: Environmental Site Assessment of the Encina Power Station (EPS) by SDG&E.

The AFC states that removal of two existing fuel tanks are a part of the Encina facility's ongoing operations and maintenance activity and are not part of the proposed project. However, the area underneath these fuel tanks will be used for proposed project structures and activities. The city has stated its belief that tank demolition would be under the Commission's jurisdiction. Since the area is already identified as a Historical Recognized Environmental Condition (HREC), the environmental investigation of the site after demolition, and completion of any necessary remedial action, should be done well in advance of any project construction to ensure that any possible contamination is identified and mitigated to a level of insignificance. The San Diego Regional Water Quality Control Board (SDRWQCB) is the Lead Agency for the Phase II Environmental Site Assessment and all necessary remedial activities and works with the Department of Toxic Substances Control (DTSC) as a Responsible Agency. Investigation and remediation of hazardous waste during the construction phase of a project should only be done as a contingency measure, when previously unknown contamination is encountered during the normal construction activities.

**DATA REQUEST**

112. Given the existing documented level of contamination near Tank 7 detailed in Phase II of the Environmental Site Assessment (Table 6-1), and the city's position on permit tank demolition on the EPS property (meaning the permit must be stipulated within the Energy Commission assessment), please provide a schedule of the applicant's plans for:
- a. tank demolition;
  - b. environmental investigation after demolition;
  - c. completion of soil remediation to levels of insignificance; and
  - d. removal of all contamination through a plan that includes staff names and contacts at both SDRWQCB and DTSC.

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE  
STATE OF CALIFORNIA**

APPLICATION FOR CERTIFICATION  
FOR THE *CARLSBAD ENERGY CENTER*  
*PROJECT*

Docket No. 07-AFC-6  
PROOF OF SERVICE  
(Revised 2/5/2008)

**INSTRUCTIONS:** All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION  
Attn: Docket No. 07-AFC-6  
1516 Ninth Street, MS-14  
Sacramento, CA 95814-5512  
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**ENERGY COMMISSION**

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**DECLARATION OF SERVICE**

I, Maria Sergoyan, declare that on February 28, 2008, I deposited copies of the attached Carlsbad Energy Center Project (07-AFC-6) Data Request, Set #2 in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

**OR**

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

**Original Signed in Dockets**  
**Maria Sergoyan**