

DOCKETED

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October 29, 2014
George L. Piantka, PE
NRG West Director, Environmental Business
5790 Fleet Street, Suite 200
Carlsbad, CA 92008

**CARLSBAD ENERGY CENTER PROJECT AMENDMENT (07-AFC-6C) DATA
REQUESTS, Set 1**

Dear Mr. Piantka:

We continue to review the petitions to modify the licensed Carlsbad Energy Center Project (CECP), and require additional information to supplement our analyses pursuant to Title 20, California Code of Regulations, sections 1716 and 2025. We seek 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.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice of explanation as to both Commissioner Karen Douglas, Presiding Committee Member for the Carlsbad Energy Center Project Amendment, and me, within 20 days of receipt of this letter (*see* CCR § 1716(f)), i.e. November 18, 2014. The notification should contain the reasons for not providing the information, the need for additional time, and the grounds for any objections.

DATA REQUESTS

Background: The amendment application Page 5.1-30 and page 5.1-68¹ indicates that a Prevention of Significant Deterioration (“PSD”) permit will be required for greenhouse gas emissions.

- 1) Please provide a copy of the PSD permit application submitted to Region 9 for approval of the PSD permit.
- 2) If a PSD application has not been submitted to the EPA please indicate why it has not and when the applicant intends to submit one.
- 3) Please provide the project owner’s schedule for acquisition of the PSD permit.

¹ “If this PSD delegation to the SDAPCD does not occur in a timely manner, a separate PSD permit application will be submitted to EPA Region 9 for a PSD review/permit for GHG emissions.”

- 4) Please provide all past and future copies of correspondence between the EPA and the project proponent related to this particular PSD permit. This is an ongoing data request.
- 5) Please provide electronic copies or transcripts of any written or oral correspondence with the CEC staff or CEC Commissioners related to the PSD permit.

Background: The applicant's agreement with the City of Carlsbad provides for a monetary payment if the existing Encina Project is required to operate at the same time the amended Carlsbad Peaker project is operating.²

- 6) Please provide an air quality modeling analysis showing the impact of the 965 MW Encina Power Station operating at the same time as the amended 632 MW Carlsbad project.
- 7) Please provide a health risk assessment assuming that both the Encina Project and the 632 MW Amended Carlsbad project are operating simultaneously.
- 8) Please provide a nitrogen deposition analysis assuming both projects continue to operate.

Background: It is likely that the project may be operated continuously or intermittently on natural gas derived from imported liquefied natural gas ("LNG").

- 9) Please provide an air quality analysis based on the project utilizing imported LNG.

Background: SDG&E recently sold a forty-eight acre parcel at the Encina Parcel Site to Caruso Holdings. Caruso plans to erect an upscale mall at the site.

- 10) Please identify all projects that will be under construction at the same time as the amended CECP.
- 11) Please provide a construction air quality impact analysis of all projects that will be under construction during the construction and demolition of the amended CECP. Please include the Carlsbad desalination plant and any other reasonably foreseeable projects.
- 12) The amendment application states "Upon completion of demolition of EPS, portions of the western areas of the Cabrillo Parcel will be removed from CEC jurisdiction and made available for redevelopment." Please describe the impacts from reasonably foreseeable additional development in the analysis of this project.

Background: The petition to amend states that the amended CECP will be constructed in the footprint of several existing fuel oil tanks. Given the known existing contamination near the fuel oil tanks, please provide a schedule for:

- 13) Demolition of the fuel oil tanks.
- 14) Environmental investigation after removal of the tanks.

² See Article 8.4 of the agreement: "(a) Liquidated damages provides that: in the event that CECP becomes commercially operable and the Encina Power Station continues to operate, NRG has agreed to make the liquidated damage payment as provided by section 3.1(A)(VI)."

15) Remediation of contaminated soil found near the tanks to a level of insignificance.

Background: The CECP must comply with local, state, and federal laws.

- 16)** Please explain how “public convenience and necessity” (as discussed in California Public Resources Code § 25525) requires the capacity and energy represented by the CECP and that there are not more prudent and feasible means of providing this perceived energy need.
- 17)** Please explain how the CECP facility will comply with Carlsbad Local Ordinance CS-158, Ordinance CS-159, Ordinance CS-160, and Resolution 2011-230.
- 18)** Please identify the project’s “extraordinary public purpose” as defined in Carlsbad Municipal Code 21.36.020.
- 19)** Please describe how the project is coastal dependent as established by the California Coastal Act (Pub. Res. Code § 30101).
- 20)** Please explain whether the project meets the requirement for a thirty-five foot height limitation (Agua Hedionda Land Use Plan Page p. 17, § 1.9; Exhibit 412).
- 21)** Please explain whether the waters of Agua Hedionda are waters of the United States as defined in the Coastal Zone Management Act.
- 22)** Please identify exactly what permits and government approvals – coastal development, air pollution permit, PSD permit, endangered species act take permit, Army Corps of Engineers, California Fish and Game, USFWS, NPDES, etc. – the CEC license would represent. Identify the public participation opportunities, including public notice requirements, for the subsumed approvals, and compare them to the public participation opportunities before the Commission.
- 23)** Please identify all other government approvals not subsumed by the CEC license that would be required for the project to be developed and operated. Please include application status and expected dates of approval.
- 24)** What state and federal regulations govern the project’s impacts on these waters?
- 25)** Please identify potential air quality impacts on adjacent endangered species, flora, and sensitive habitats.
- 26)** Please discuss whether a No Project Alternative, which is “a factually based forecast of the environmental impacts of preserving the status quo” has been examined (84 Cal.App.4th 315A, *Planning & Conservation League v. Dept. of Water Resources* (2000) at p. 917).

Background: The Applicant should explain the environmental impacts of the CECP.

- 27)** Please provide the most recent two years of on-site air quality monitoring.
- 28)** Please provide the most recent two years of on-site meteorological data.

- 29) Based on the information in the two studies conducted by Mark Z. Jacobson, please describe whether your studies of CECP's potential air quality impacts have taken into account the enhancement of local air pollution by urban CO₂ domes.³
- 30) Regarding the approved combined-cycle project compared to the proposed single-cycle project, please prepare a side by side comparison of air pollution and greenhouse gas emissions at varying operating loads.
- 31) Has the Applicant examined the value of underground carbon sequestration, including the value it might provide in offsetting the cost of participating in the state CO₂ cap and trade scheme as well as the value of increased electricity sales from preferred position in queue? If so, what did the Applicant find?
- 32) Have nearby farm owners and management been surveyed to determine if they would accept heat or carbon dioxide for intensified farming methods? Has the Applicant surveyed nearby farm owners and management to determine under what terms they would participate in algae farming for bio-sequestration of greater amounts of, what would otherwise be, air pollutants? If so, what did the Applicant find?
- 33) Have heat and cooling users within one mile of the project been surveyed to examine who would accept hot water from the project? Is there a cost benefit analysis that considers increased electrical sales derived from a preferred position in the loading order because of the increased efficiency and environmental benefits?
- 34) Please describe how much on site solar could be developed in conjunction with the facility if all practicable surface area on buildings, in the parking areas, and elsewhere on-site are covered by solar panels. How would this lower emissions and effective heat rates?
- 35) Please explain whether the effectiveness of varying amounts and types of energy storage can be used to reduce environmental impacts and improve grid stability through smoothing or other advantages.
- 36) Please identify the height that the temperature or pollutant emissions from the stacks would result in bird mortality in a collision with the plume. Identify the height at which emissions from the facility would merely disrupt avian flight.
- 37) Please explain whether the rapid start turbines startle local birds into flight into the intermittent inferno plumes?

³ Environmental Science and Technology 2010, 44, 2497-2502, *Enhancement of Local Pollution by Urban CO₂ Domes* by Mark Z. Jacobson (March 2010), and Geophysical Research Letters, Volume 35, L03809, *On the Causal Link Between Carbon Dioxide and Air Pollution Mortality* by Mark Z. Jacobson (February 12, 2008); available at Study the 2 reports by Mark Z. Jacobson, *Enhancement of Local Air Pollution by Urban CO₂ Domes and On the causal link between carbon dioxide and air pollution mortality*. Model the localized impacts consistent with the reports methodology. The reports are available at; http://www.energy.ca.gov/sitingcases/piopico/documents/others/2012-09-11_Simpson_Supplemental_Comments_3_TN-67083.pdf.

- 38)** Please identify the distance between proposed electrical wires, identify the wingspan of a typical adult brown pelican, and demonstrate how the distance between the wires prevents avian electrocution and the associated threat to public health.
- 39)** Has the pollution and potential pollutant accumulation in the lagoon been studied? If so, what were the results?
- 40)** Please identify the potential impacts to species and habitats including aquatic species by elevated noise and light levels including construction noise, pile driving, and vibrations.
- 41)** Have greenhouse gas emissions from construction been modelled? If so, please describe what the modelling showed.
- 42)** Have any studies been conducted examining the deposition impacts of criteria and toxic emissions on nearby critical habitats including the vernal pools? If so, what were the results of those studies?
- 43)** Have any studies been conducted examining the impacts of ammonia emissions and the millions of gallons of vaporized water per day on biological resources? If so, what were the results of those studies?
- 44)** When was the last time the biological assessment was updated utilizing the most recent environmental reports? Is an update to the biological assessment planned?
- 45)** Please describe the effects of potential raptor perches in the planned tree canopy.

Background: The Applicant should explain the public health impacts of the CECP.

- 46)** Please provide the results of all research and consideration completed following the disclosure during public comments in the initial proceeding of a cluster of adjacent leukemia/cancer cases and deaths potentially linked to the facility. If the issue was not studied, please explain why not. Also discuss whether any future studies are planned to determine the scope of public health impacts (especially leukemia and cancer clusters) from the amended project and whether it would exacerbate the effects on public health.
- 47)** Has a survey of the gas pipeline intended to serve CECP been conducted in order to help ensure pipeline safety and help prevent another catastrophe like the one in San Bruno?

Background: data requests concerning the operation of the CECP.

- 48)** Please compare the original approved combined-cycle facility with the amended proposal and disclose any requirements from SDG&E that the original facility could not satisfy.
- 49)** If the operating parameters of the approved facility do not satisfy SDG&E requirements, please identify energy storage or other options that would cause the original plan to satisfy SDG&E requirements. Quantify the cost effectiveness and benefits to the developer of the improved position in the loading order.

- 50)** Please describe how much renewable capacity the plant would support compared to the current system capacity. Include presently dispatched renewable resources, other proposed gas plants that propose to support renewables, and compare to the original plant's ability to support renewable energy. Explain whether the project is in the best the location to support renewable energy.
- 51)** If the amendment is denied, does the Applicant have full authority to develop the previously approved project? If not, identify any other approvals or permits required to allow that project to proceed and the status of applications.
- 52)** If the amendment is denied, would the Applicant develop the approved project?
- 53)** Please disclose all ongoing communication with regulators/government agencies regarding the approval of the amended project.
- 54)** Is the project considered a Public Utility?
- 55)** Has a MACT analysis been conducted? If not, why?
- 56)** Please describe whether this project will displace less efficient gas plants or renewable energy.
- 57)** If grid stability requires the facility to operate more than the permitted amount, what will happen?
- 58)** Please explain whether the project requires an override of LORs.
- 59)** Is the Administrative record from the original proceeding subsumed into this proceeding?
- 60)** The Amendment application states "Construction activities for the Amended CECP will involve similar activities as those described for the Licensed CECP in the Final Decision." Please describe the impacts associated with the amended CECP noise, light, runoff, and air emissions.