

DOCKETED

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POWER OF VISION

October 7, 2014

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VIA E-FILING

CARLSBAD ENERGY CENTER PROJECT 07-AFC-06C

DATA REQUEST SET II

To Applicant

George L. Pianka, P.E.

NRG Energy, West Region

5790 Fleet Street, Suite 200

Carlsbad, CA 92008

Dear Sir:

Pages 1-5 and I-6 of NRG's May 2, 2014 Petition to Amend (PTA) show a project schedule, "1.10 Schedule". Since then, the California Energy Commission (CEC) on 9/23/2014 docketed their Order Consolidated Amendment Petitions and on 9/26/2014 docketed their Committee Scheduling Order.

DATA REQUEST #6

Please provide an updated version of the "1.10 Schedule" which will take into consideration the recent Commission's orders. Also, please clarify when in your schedule you will place orders for the six GE gas turbine units and when these units will be delivered on site.

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In order to provide one uninterrupted level area for the six GE gas turbine units, three existing east-west berms and roadways will have to be excavated.

DATA REQUEST #7

Please specify the total cubic yardage of material that will be removed when excavating the three east-west berms currently surrounding the tanks in the proposed pit area for the six GE gas

turbine units. Please indicate the lay down area for this material if it will be distributed on site. If material is to be disposed of off-site, indicate how many truck trips will be required and the approximate dates of beginning and end of such truck haulage.

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At the September 24 & 25, 2014 CECP Public Workshop NRG indicated that they would be submitting a revised Transmission Line plan wherein the two northern-most 98 foot high transmission poles would be moved from adjacent to the upper rim road to adjacent to the lower rim road. An additional new pole would be added adjacent to the lower rim road. However, the two southern-most 98 foot high transmission poles would remain adjacent to the upper rim road. In order to adequately evaluate the impact of the new location for the transmission line, we are making the following data requests.

DATA REQUEST #8

Please provide four dimensioned cross-section drawings (one for each pair of power units), looking north, and extending from the west at the upper rim road through the gas turbine units, transformers, circuit breakers, H-frames, transmission poles to the anticipated future freeway I-5 roadway. These cross section drawings should show the upper and lower rim roads, pit slopes, gas turbine units, stacks, transformers, circuit breakers, H-frames, power poles, safety berm adjacent to the widened I-5 freeway, future visual screening (trees?) after I-5 widening, property fence after freeway widening, and the relocated I-5 freeway. Horizontal distances between each of these items should be clearly stated, as well as the vertical heights of each item.

DATA REQUEST #9

Please provide an elevation drawing along the route of the proposed transmission line from the northern-most pole adjacent to the widened I-5 to the southern-most pole adjacent to the widened I-5. Show all clearances (vertical and horizontal) along the way from the (sagged) transmission cables to the ground, embankments, roadways, buildings and final stage vegetation (under wind conditions).

DATA REQUEST #10

Will the southern-most (corner) transmission pole require stays? If so, please provide an enlarged plan view showing the pole and its stays.

DATA REQUEST #11

Please provide three visual renderings (SB, NB & SNB) of how the proposed new location of the transmission line will look from points on the modified I-5 freeway, as shown on the attached "FIG DR POV 5-1 Modified by POV". These renderings should show the visual screening

(trees?) available at the time immediately after the transmission poles are erected, a time when visual impact will be most severe.

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On page 3-8 of the PTA, Section 3.5 References, lists the following references:

"Electric Power Institute. 1975. *Transmission Line Reference Book, 345-kV and Above*. Palo Alto, California"

" Electric Power Institute. 1978. *Transmission Line Reference Book, 115-138kV Compact Line Design*. Palo Alto, California"

There is NO reference to a 230 kV transmission line design guide! If, as indicated, the PTA used a 345 kV design guide, then that portion of the transmission line may be overdesigned.

Both the 1975 and the 1978 references are grossly out of date. More appropriate references would be the "EPRI AC Transmission Line Reference Book -- 200kV and Above, 2013 Edition" and "EPRI Transmission Line Reference Book: 115-345 kv Compact Line Design, The Blue Book" published 05-Nov-2008.

Accordingly, to help determine whether the 138kV and 230kV transmission lines are not over or under designed, please respond to the following data requests:

DATA REQUEST #12

For the 138kV transmission line please show in side-by-side tables (one side being the values in the PTA cited " Electric Power Institute. 1978. *Transmission Line Reference Book, 115-138kV Compact Line Design*. Palo Alto, California", the other side being the more current "EPRI Transmission Line Reference Book: 115-345 kv Compact Line Design, The Blue Book"published 05-Nov-2008.) the following recommended design values:

- a. Vertical clearances of conductors above ground and roadways.
- b. Vertical clearances of conductors from other supporting structures and buildings.
- c. Vertical separation between phases of the same circuit.
- d. Number of insulators and length of the string.

DATA REQUEST #13

For the 230kV transmission line please show in side-by-side tables (one side being the values in the PTA cited "Electric Power Institute. 1975. *Transmission Line Reference Book, 345-kV and Above*. Palo Alto, California",

the other side being the more current "EPRI AC Transmission Line Reference Book -- 200kV and Above, 2013 Edition") the following recommended design values:

- a. Vertical clearances of conductors above ground and roadways.
- b. Vertical clearances of conductors from other supporting structures and buildings.
- c. Vertical separation between phases of the same circuit.
- d. Number of insulators and length of the string.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arnold", written in black ink.

Arnold Roe, Ph.D.

Julie Baker

NEW ADDED VIEWPOINT "SNB"



LEGEND

- Encina Power Station Site
- Amended CECP Project Site
- Poseidon Desalination Site
- Footprint of the Amended Project's Major Features

- KOP
- Southbound I-5 Viewpoint
- Northbound I-5 Viewpoint
- A' — Cross-Section

Figure DR POV 5-1 Modified by POV
Aerial View of Project Site and Locations of Key
Observation Points and Supplemental Viewpoints
 Carlsbad Energy Center Supplemental Project
 Carlsbad, California (07-AFC-06C)
 Petition to Amend