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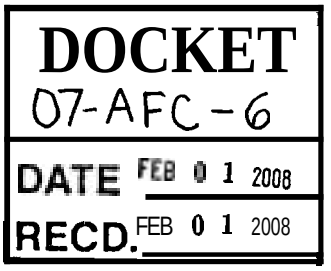
February 1,2008

BY HAND DELIVERY AND E-MAIL



Mike Monasmith, Project Manager
California Energy Commission, Siting Division
1516 Ninth Street, MS-15
Sacramento, CA 95814

Re: Carlsbad Energy Center Project (07-AFC-6)
Response to Questions

Dear Mr. Monasmith:

On behalf of Carlsbad Energy Center LLC (''CECP''), please find enclosed herewith Carlsbad Energy Center LLC's response to Questions proposed by Mr. Wesley Marx, resident of the City of Carlsbad (includes email correspondence and attachment). As a courtesy, CECP is providing copies of the responses to all parties identified on the attached proof of service list.

Should you have any questions regarding this submittal, please contact me at (916) 447-0700.

Respectfully submitted,

John A. McKinsey

JAM:eyh
cc: See Proof of Service List Attached
Wesley Marx at wmarx33@,sbcglobal.net

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** **(As of 2/1/2008)**

DECLARATION OF SERVICE

I, Elizabeth Hecox, declare that on February 1, 2008, I caused to be transmitted via electronic mail consistent with the requirements of the California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210, the following documents to the below listed entities:

CARLSBAD ENERGY CENTER LLC'S RESPONSE TO QUESTIONS PROPOSED BY MR. WESLEY MARX, RESIDENT OF THE CITY OF CARLSBAD (INCLUDES EMAIL CORRESPONDENCE AND ATTACHMENT)

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-6
1516 Ninth Street, MS-14
Sacramento, CA 95814-5512
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INTERVENORS
None as of 2/1/08

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

Elizabeth Hecox

From: Hemig, Tim [Tim.Hemig@nrgenergy.com]
Sent: Friday, January 18, 2008 1:00 PM
To: Wesley Marx
Subject: RE: carlsbad energy center project

Attachments: CECP Q&A For Wesley Marx_final_01-18-08.pdf

CECP Q&A
Wesley Marx_fi

Mr. Marx:

Carlsbad Energy Center LLC appreciates your interest in the project and we thank you for your thoughtful questions. In addition to the information provided in this attachment, there is also considerable information regarding the project on the CEC's website, including the entire Application for Certification and its supporting documentation. In addition, as the CEC process continues, documents and information prepared by Carlsbad Energy Center LLC and the CEC will be posted on the CEC's website (http://energy.ca.gov <http://energy.ca.gov/>). In addition, copies of the AFC and other project documents have been provided to local libraries and the City and are available for review. We also encourage you to periodically view our own project website at www.carlsbadenergycenter.com <http://www.carlsbadenergycenter.com/> where additional information is posted related to the project.

Sincerely,

Tim Hemig

From: Wesley Marx [mailto:wmarx33@sbcglobal.net]
Sent: Wednesday, December 19, 2007 4:41 PM
To: Hemig, Tim
Subject: carlsbad energy center project

Dear Mr. Hemig,

A Carlsbad resident, I attended the very informative site visit and hearing 12/18. I would like to ask the following questions.

What level seismic event would the Center be designed to withstand? What is the design level for the existing plant and stack?

How tall is the existing stack? 400'? 420'? When built?

Do offsite channels, runoff or streams drain into NRG property?

When drawing water from the lagoon, what strength current does the intake process create?

What species of fish are captured in the intake process?

Does NRG hold title/control to lagoon seabed? Entire lagoon or part? Why was control passed to SDGE/NRG?

Is this control subject to any oversight by the State Lands Commission (SLC)?

If NRG no longer uses intake, would control revert to SLC?

Does NRG have any jurisdiction over the lagoon surface, water column?

Are there any contractual agreements between NRG and Carlsbad Aquafarms?

Has or will NRG consider solar or wind generation onsite?

Thank you for hosting the site visit and for responding to my questions at your convenience.

Yours sincerely,
Wesley Marx wmarx33@sbcglobal.net

Questions and Answers
Wesley Marx – A Carlsbad Resident

(Questions e-mailed to Tim Hemig: Carlsbad Energy Center LLC
December 19, 2007)

A Carlsbad resident, I attended the very informative site visit and hearing on 12/17. I would like to ask the following questions.

What level seismic event would the Center be designed to withstand? What is the design level for the existing plant and stack?

Response: Detailed information regarding seismicity in the vicinity of the Carlsbad Energy Center Project (CECP) and the existing Encina Power Station is included in the CECP Application for Certification (AFC), Section 5.4.3.5.2 Seismic Shaking. As part of the AFC, there is a complete discussion of the geologic setting of the region. Copies of the AFC are available for review at local libraries and at the offices of the City of Carlsbad. In addition, the CECP AFC is available on the California Energy Commission's (CEC's) website at http://www.energy.ca.gov.

In California, buildings and structures are required to be designed and constructed to meet the seismic requirements of the California Building Code (CBC). The City of Carlsbad and the CECP site are defined as being in Seismic Zone 4, as are the rest of San Diego County and the majority of southern California. The CBC includes specific requirements for the design and construction of buildings and structures located within Seismic Zone 4 and the CECP will be designed to meet the CBC Seismic Zone 4 requirements. The Chief Building Official (CBO) assigned by the CEC will conduct a detail evaluation of the design of the CECP to ensure that it meets the seismic design requirements of the CBC.

The following information is from the CECP AFC Section 5.4.3.5.2 Seismic Shaking (p. 5.4-5) and provides information regarding the specific seismic event for which the CECP will be design for in accordance with the CBC:

"The controlling fault impacting the CECP site area is the Rose Canyon fault. This fault is capable of generating a peak bedrock acceleration (PBA) along its trace of 0.47g (Blake, 2004a) based on the maximum credible earthquake (MCE) event. According to the Caltrans Seismic Hazard Map, a PBA of approximately 0.42g at the CECP site and along the linears is estimated based on the MCE event. The Design Base Earthquake (DBE) PBA ground motion at the site is estimated at 0.27g (Blake, 2004b)."

Regarding your question: *What is the design level for the existing plant and stack?*

San Diego Gas & Electric (SDG&E) was the original owner of the existing Encina Power Station and was responsible for the construction of the existing Units 1 to 5 and the existing stack. Units 1, 2 and 3 were constructed in the 1950s and Units 4 and 5 were constructed in the 1970s by SDG&E. Cabrillo Power I LLC, an indirect wholly

-owned subsidiary of NRG West LLC, purchased the existing Encina Power Station from SDG&E in 1999 as part of the state-wide requirement for regulated public utilities, such as SDG&E, to divest themselves of fossil-fueled, thermal power plants, as part of California's electrical power deregulation process. While Carlsbad Energy Center LLC and Cabrillo Power I LLC do not have specific information on SDG&E's seismic design for the existing Encina Power Station, the existing Encina Power Station and stack would have been designed in accordance with the applicable building code in existence at the time of its design and construction.

How tall is the existing stack? 400'? 420'? When built?

Response: The top of the existing stack at the Encina Power Station is 400 feet above mean sea level. It was constructed by SDG&E and was completed in 1978.

Do offsite channels, runoff or streams drain into NRG property?

Response: There is an open drainage channel that traverses the Encina Power Station site in a southeast to northwest direction, west of the railroad right-of-way. Surface water, predominately from areas outside and to the southeast of the power plant property, drains to this channel and flows to the outer lagoon of the Agua Hedionda Lagoon.

There are no offsite drainage channels that enter the CECP site that are located east of the railroad right-of-way.

When drawing water from the lagoon, what strength current does the intake process create?

Response: First, it is important to point out that the CECP will be dry-cooled, that is the CECP will not rely upon once-through-cooling using sea water as do existing Units 1 through 5 at the existing Encina Power Station. An important component of the CECP is that it will result in the permanent reduction of 225 million gallons per day of sea water for cooling of Units 1 through 3, and will directly result in the protection of marine life.

The "strength" of the "current" created by the existing Encina Power Station sea water intake structure, typically referred to as the "approach velocity," varies with the number of pumps in operations, and tide level. The "approach velocity" is measured in feet per second (ft/sec). Based on measurements taken on November 16, 2005, the average approach velocity at the intake structure was 1.4 ft/sec. When this measurement was taken, eight of the ten cooling water pumps were in operation (Unit 4 was not operating and its two pumps were not operating). To estimate a "maximum" approach velocity, this measurement was adjusted to assume each of the ten cooling water pumps was operating and the tide height was adjusted to

mean sea level. With these adjustments, the maximum approach velocity was estimated at 2.9 ft/sec.

What species of fish are captured in the intake process?

Response: First, as noted in the response above, the CECP will be dry-cooled and will not rely upon once-through-cooling using sea water as do existing Units 1 through 5 at the existing Encina Power Station. As noted above, the CECP will result in the permanent reduction of 225 million gallons per day of sea water for cooling of Units 1 through 3, corresponding to a reduction in the impingement and entrainment of marine life.

Based on data collected from June 2004 through May 2005, the following fish and shellfish species were the most abundant in the entrainment and impingement sampling at the Encina Power Station intake located in Agua Hedionda Lagoon:

Taxon	**Common Name**
Fish	
Atherinopsidae	silversides
Atractoscion mobilis	white seabass
Clevelandia ios, Ilypmus gilberti,Quietula y-cauda	CIQ goby complex
Cymatogaster aggregate	shiner surfperch
Engraulidae	anchovies
Genyonemus lineatus	white croaker
Hyperprosopon argenteum	walleye surfperch
Hypsoblennius ssp.	blennies
Hyposypops rubicundus	garibaldi
Parlabrax ssp.	sand basses
Parlicihthys californicus	California halibut
Roncador stearnsii	spotfin croaker
Sandinops sagax	Pacific sardine
Seriphus politus	queenfish
Shellfish	
Cancer ssp	Cancer crabs
Panulirus interruptus	California spiny lobster
Loligo opalescens	market squid
Octopus ssp.	octopus

Does NRG hold title/control to lagoon seabed? Entire lagoon or part? Why was control passed to SDG&E/NRG?

Response: Cabrillo Power I LLC holds title to most of the land under the Agua Hedionda Lagoon (except for a small area along the north shore between the lagoon inlet under Carlsbad Blvd and to the corner of the fence line on the west side of the fish hatchery, with is still owned by SDG&E. There is also an easement owned by SDG&E.

Cabrillo Power I LLC does not hold title to the shoreline above the mean high water line in the large, inner lagoon.

The California Public Utilities Commission (CPUC) approved the transfer of the Encina Power Station, including the Agua Hedionda Lagoon in the sale of the plant by SDG&E to Cabrillo Power I LLC.

Is this control subject to any oversight by the State Lands Commission (SLC)?

Response: The State Lands Commission has leased to Cabrillo Power I LLC certain property on which the intake and discharge rock jetties are located (approximately 19 years of the lease term remains), as well as for placement of sand on the beach near the jetties, and for the location of the off-shore oil mooring station and pipeline. Please note than none of these areas will be used by the CECP.

If NRG no longer uses intake, would control revert to SLC?

Response: The lease on the intake and discharge jetties is subject to removal upon expiration of the State Lands Commission lease.

Does NRG have any jurisdiction over the lagoon surface, water column?

Response: The property ownership rights of the underwater portion of the lagoon is owned by Cabrillo Power I LLC, which has granted licenses for use to certain licensees, including the City of Carlsbad for recreation purposes in the large, inner lagoon, the YMCA for the middle lagoon, and for aquaculture in certain portions of the outer lagoon.

Are there any contractual agreements between NRG and Carlsbad Aquafarms?

Response: Cabrillo Power I LLC has renewed the existing license to Carlsbad Aquafarm, Inc. for shellfish aquaculture in outer lagoon and for facilities along the western area of the lagoon.

Has or will NRG consider solar or wind generation onsite?

Response: As discussed in Section 6.0 – Alternatives of the CECP AFC, various alternative electrical generation technologies, including solar and wind technologies have been considered. The alternative analysis considers the objectives of the CECP and evaluates the ability of the various alternative electrical generation technologies to feasibility attain most of the basic objectives of the CECP. In terms of considering solar and wind electrical generation technologies, the following two key CECP project objectives, which are based on findings by the California Public Utilities Commission (CPUC) regarding the additional electrical generation needs in the San Diego region, are directly relevant:

- Meets the expanding need for new, highly efficient, reliable electrical generating resources located in the load center of the San Diego region.
- Improves San Diego electrical system reliability through fast starting generating technology, creating a rapid responding resource for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation.

Section 6.6 of the CECP AFC provides an evaluation of alternative electrical generation technologies and solar and wind technologies are specifically addressed in Section 6.6.5 and Section 6.6.6 respectively.

Solar radiation (sunlight) can be collected directly to generate electricity with solar thermal and solar photovoltaic technologies, or indirectly through wind generation technology in which the sunlight causes thermal imbalance in the air mass, creating wind. Wind generation and two types of solar generation, thermal conversion and photovoltaics, were considered as alternative technologies to the natural gas-fired combined cycle technology proposed for the CECP. These are described in the following sections.

Solar Thermal

Most of these technologies collect solar radiation and then heat a working fluid to power a turbine/generator. The primary systems that have been used in the United States capture and concentrate the solar radiation with a receiver. These more advanced technologies are referred to as concentrating solar systems and are classified by how they collect solar energy. The three main receiver types are mirrors located around a central receiver (power tower), parabolic dishes and parabolic troughs.

The power tower systems use many large helostats (sun-tracking mirrors) to concentrate and focus sunlight on a tower mounted receiver. The receiver contains the heat transfer fluid that is used to generate electricity in a turbine/generator. The Solar Two plant located near Barstow, California is a power tower solar project.

The parabolic dish and trough systems use parabolic structures (either dishes or troughs) to collect and concentrate sunlight onto receiver pipes (attached to the parabolic structures) containing a working fluid. The working fluid, typically oil, is used to generate electricity in a conventional steam generator.

Another solar system with good commercial prospects is the Dish/Engine (D/E) system. This system is a solar collection/concentration array coupled to a Stirling engine. A D/E system collects solar energy in a similar manner. However, instead of the concentrators heating a working fluid that is directed to a turbine generator, it heats a working gas in a Stirling engine/generator. The Stirling engine/generator works like a standard engine generator, with pistons being moved by the heated gases (from energy concentrated by the collector). Individual D/E systems range in side from 9 to 25 kilowatts and can be grouped to provide large efficient systems.

All solar thermal technologies require considerable land for the collection receivers and are best located in areas of high solar incidence. Land requirements for concentrating solar technologies are on the order of 10 acres per megawatt. Based on the CECP site size of approximately 23 acres, solar thermal technologies would be able to generate approximately 2 megawatts, only a fraction of the 540 megawatts that will be generated by the CECP. To provide the same electrical generation capacity as the CECP, a solar thermal generation technologies would require over 500 acres.

In addition, power is typically only generated while the sun shines, so the units do not supply power when clouds obscure the sun or from early evening to late morning. Various solar thermal electrical generating projects are in the planning stage in California. The sites being considered are located in the desert areas of Southern California and some of the sites being considered are in the range of 500 to 1,000 acres.

Solar thermal electrical generation at the CECP site is not capable of meeting the two key CECP project objectives noted above, which are based on findings by the California Public Utilities Commission (CPUC) regarding the additional electrical generation needs in the San Diego region:

- Meets the expanding need for new, highly efficient, reliable electrical generating resources located in the load center of the San Diego region.

As noted above, solar thermal electrical generation are being evaluated in the desert areas of Southern California, but not in coastal areas such as the San Diego region due to periodic weather conditions of low clouds and fog during the early morning and late afternoon/early evening during which solar thermal plants would not be able to generate electricity. In addition, due to the acreage required, solar thermal plants are typically sited in remote, rural areas, not in urban/suburban areas.

- Improves San Diego electrical system reliability through fast starting generating technology, creating a rapid responding resource for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation.

This CPUC objective recognized the need to provide fast starting electrical generation during peak demand situation, such as a hot summer day when electrical demand peaks in the early afternoon and continues into the early evening and may persist for several days. Solar thermal technologies do not have a fast start capability and are not suited to meeting peak demand periods.

Based on this combination of the factors, solar thermal technology was eliminated from consideration as an alternative to the CECP.

Solar Photovoltaic

This technology uses photovoltaic "cells" to convert solar radiation directly to direct current electricity, which is then converted to alternating current. Panels of these cells can be located wherever sunlight is available. This technology is environmentally benign and is commercially available, since panels of cells can theoretically be connected to achieve any desired capacity. While this technology has a bright future, it does not meet the key project objectives due to similar issues about space at the site described above and at the current time has higher costs than the selected combined-cycle technology. Therefore this technology was eliminated from consideration as an alternative to the CECP.

Wind

This technology uses a wind-driven rotor (propeller) to turn a generator and generate electricity. Only limited sites in California have an adequate wind resource to allow for the installation of wind generators, and many of these sites have already been developed or are remote from electric load centers and have limited or no transmission access. Even in prime locations the wind does not blow continuously, so capacity from this technology is not always available. In California, the average wind generation capacity factor has been approximately 22 percent. In addition, depending on the site and/or season, the technology cannot be depended upon to be available at meet peak demand situations, such as a hot summer day when electrical demand peaks in the early afternoon and continues into the early evening and may persist for several days, as such peak conditions may occur when the wind is not blowing. The technology is commercially available and implementable at certain sites. The technology is relatively benign environmentally, although at some sites land consumption and effects on visual resources and avian species are a concern.

As with solar thermal electrical generation, wind generation technology at the CECP site is not capable of meeting the two key CECP project objectives regarding the additional electrical generation needs in the San Diego region:

- Meets the expanding need for new, highly efficient, reliable electrical generating resources located in the load center of the San Diego region.
- Improves San Diego electrical system reliability through fast starting generating technology, creating a rapid responding resource for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation.

Therefore, due to the unavailability of good sites near the San Diego load center, limited dependability in terms of meeting peak demand periods, and relatively high cost, wind technology was eliminated from consideration as an alternative to the CECP.

Thank you for hosting the site visit and for responding to my questions at your convenience.

Mr. Marx: Carlsbad Energy Center LLC and Cabrillo Power I LLC appreciate your interest in the project and we thank you for your thoughtful questions. In addition to the information provided above, there is considerable information regarding the CECP on the CEC's website, including the entire AFC and its supporting documentation. In addition, as the CEC process continues, documents and information prepared by Carlsbad Energy Center LLC and the CEC will be posted on the CEC's website (http://energy.ca.gov). In addition, copies of the AFC and other CECP documents have been provided to local libraries and the City and are available for review. We also encourage you to periodically view our own project website at www.carlsbadenergycenter.com where additional information will be posted related to the project.

Sincerely

Tim Hemig
Vice President, Carlsbad Energy Center LLC