

# Memorandum

<b>DOCKET</b>	
<b>07-AFC-6</b>	
<b>DATE</b>	DEC 07 2007
<b>RECD.</b>	DEC 07 2007

Date: December 7, 2007  
 Telephone: (916) 653-1245  
 File: 07-AFC-6

To: Vice-Chairman James D. Boyd, Presiding Member  
 Commissioner, John Geesman, Associate Member  
 Hearing Officer, Paul Kramer

From: California Energy Commission - James W. Reede, Jr., Ed.D.  
 1516 Ninth Street Siting Project Manager  
 Sacramento, CA 95814-5512

Subject: **CARLSBAD ENERGY CENTER PROJECT (07-AFC-6)**  
**ISSUES IDENTIFICATION REPORT**

Attached is the staff's Issues Identification Report for the Carlsbad Energy Center project (07-AFC-6). This report serves as a preliminary scoping document that identifies the issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Informational Hearing and Site Visit to be held in Carlsbad on December 17, 2007.

cc: Docket (07-AFC-6)  
 Proof of Service List

Attachment

PROOF OF SERVICE (REVISED 11/6/07) FILED WITH  
 ORIGINAL MAILED FROM SACRAMENTO ON 12/7/07  
 JP

**CARLSBAD ENERGY CENTER PROJECT**

(07-AFC-6)

December 7, 2007

**ISSUES IDENTIFICATION REPORT**

**CALIFORNIA ENERGY COMMISSION**

**Energy Facilities Siting Division**

**ISSUES IDENTIFICATION REPORT  
CARLSBAD ENERGY CENTER PROJECT  
(07-AFC-6)**

Table of Contents

**PROJECT DESCRIPTION ..... 1**  
**POTENTIAL MAJOR ISSUES ..... 2**  
**AIR QUALITY ..... 3**  
**LAND USE ..... 4**  
**SCHEDULING ..... 5**  
**PROPOSED SCHEDULE ..... 5**  
**STAFF TRANSITION ..... 5**

# **ISSUES IDENTIFICATION REPORT**

## **California Energy Commission Staff**

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of our discussions with federal, state, and local agencies, and our review of the Carlsbad Energy Center Project Application for Certification, Docket Number 07-AFC-6. The Issues Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address the status of issues and progress towards their resolution in periodic status reports to the Committee.

### **PROJECT DESCRIPTION**

---

On September 14, 2007, Carlsbad Energy Center, LLC, (the Applicant) submitted an Application for Certification (AFC) for the Carlsbad Energy Center Project (CECP) to the California Energy Commission to develop a thermal power plant at the existing Encina Power Station in the city of Carlsbad, California. On October 24, 2007, the Energy Commission received a supplement to the Carlsbad Energy Center AFC. The supplemental information provided additional information and more detailed explanations about the information contained in the original AFC. On October 31, 2007, the Energy Commission found that, with the supplement, the application was data adequate.

The proposed project would be a 558 megawatt (MW) gross combined-cycle generating facility configured using two Siemens SCC6-5000F, natural gas-fired combustion turbine generators (CTG), two heat recovery steam generators (HRSG), and two steam turbine generators (STG). The CECP units would connect to the electrical transmission system via 138 kilovolt (kV) and 230 kV lines that connect to the nearby San Diego Gas & Electric (SDG&E) switchyards at the Encina Power Station which is also owned by Carlsbad Energy Center, LLC parent company, NRG. The applicant has proposed to use air cooling technology rather than ocean water, once-through cooling for the plant.

Associated equipment would include emission control systems necessary to meet the applicant's proposed emission limits. Nitrogen oxide (NO<sub>x</sub>) emissions would be controlled at the power plant's stack by a combination of Ultra Low NO<sub>x</sub> combustors in the CTGs and selective catalytic reduction systems in the HRSGs using aqueous ammonia. An oxidation catalyst would be installed to limit stack carbon monoxide (CO) emissions.

The CECP site is located in the city of Carlsbad, in San Diego County in an area zoned Public Utility (PU) which specifically allows electrical generation and transmission facilities. The total land acreage of the Encina Power Station is approximately 95 acres. The Encina Power Station consists of an approximately 65 acre parcel containing the existing generating equipment (Assessor Parcel Number [APN] 210-01-43) and an approximately 30 acre parcel west of the railroad tracks containing the fuel tanks that are in the process of being removed and upon which CECP would be constructed (APN 210-01-41).

The operation of the CECP would use both Title 22 reclaimed water and potable water supplied by the city of Carlsbad. The CECP would use an average of approximately 112

acre-feet of reclaimed water per year, with a maximum peak reclaimed water use of 517 acre-feet per year. The reclaimed water would be delivered to CECP by the city of Carlsbad through a new reclaimed water pipeline, approximately 3,600 feet long, from a connection point to the existing reclaimed water pipeline system at Cannon Road and Avenida Encinas. Approximately 1,000 feet of this line would be in publicly dedicated or publicly used property. Steam cycle makeup water for CECP would be provided by treating reclaimed water using reverse osmosis and mixed bed ion-exchange technology. Up to 5 acre-feet per year of reclaimed water would be used to irrigate site landscaping annually.

Potable water for drinking, eye protection, safety showers, fire protection and service water would be served from the city's existing potable water system. Sanitary/industrial wastewater disposal would be to the city of Carlsbad (Encina Wastewater Authority) sanitary sewer system. A new 12-inch, 1,100-foot sanitary sewer line would connect the CECP site to an existing Encina Wastewater Authority sewer line located within an existing right-of-way on the Encina Power Station site adjacent to the west side of the CECP site.

The two CTGs and STGs would be interconnected to the regional electrical grid through new 138 kV/230 kV transmission connection lines that would exit the CECP site to the west and be routed to the respective existing SDG&E switchyards. No offsite electrical transmission lines would be required.

The CTGs would be designed to burn natural gas only. Natural gas would be delivered to the CECP site via an 18-inch-diameter pipeline from an existing Southern California Gas high-pressure natural gas pipeline located on the Encina Power Station. This pipeline would extend from the existing Southern California Gas natural gas pipeline which runs adjacent to the CECP site, on the west side parallel to the rail line. At the CECP site, the natural gas would flow through a flow-metering station, gas scrubber/filtering equipment, a gas pressure control station, and electric-driven booster compressors prior to entering the CTGs. Two 100-percent capacity electric-driven fuel gas compressors would be provided to boost the pressure to that required by the CTGs. The gas compressors would be located outdoors.

The applicant expects to receive a license from the Energy Commission by September 2008, with construction of the project starting in late October 2008 assuming completion of project financing. The applicant has proposed two construction scenarios. In the Single Phase Project Schedule scenario, Unit 1 commercial operation would begin during May 2010, with Unit 2 commencing commercial operation June 2010. In the two-part Phased Construction Schedule scenario Unit 1 commercial operation would begin during July 2010, with Unit 2 commercial operation beginning January 2011. Electric power generated at the CECP facility would be sold to a southern California load-serving entity under a long term power purchase agreement.

## **POTENTIAL MAJOR ISSUES**

---

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report might not include all of the significant issues that may arise during the case. Discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based on comments of other

government agencies and on our judgment of whether any of the following circumstances will occur:

1. Potential significant impacts which may be difficult to mitigate;
2. Potential areas of noncompliance with applicable laws, ordinances, regulations or standards (LORS);
3. Areas of conflict or potential conflict between the parties; or
4. Areas where resolution may be difficult or may affect the schedule.

The following table lists all the subject areas evaluated and notes those areas where potentially significant issues have been identified. Even though an area is currently identified as having no potential issues, it does not mean that an issue will not arise related to the subject area.

For example, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops or even subsequent hearings. However, we do not currently believe such an issue will have an impact on the schedule or that resolution will be difficult to achieve.

Major Issue	Data Requests	Subject Area	Major Issue	Data Requests	Subject Area
Yes	Yes	Air Quality	No	No	Noise
No	No	Biological Resources	No	No	Paleontological Resources
No	Yes	Cultural Resources	No	Yes	Public Health
No	Yes	Efficiency and Reliability	No	Yes	Socioeconomics
No	No	Electromagnetic Fields & Health Effects	No	Yes	Soils & Water Resources
No	No	Facility Design	No	No	Traffic and Transportation
No	No	Geological Hazards and Resources	No	No	Transmission Line Safety
No	No	Hazardous Materials	No	Yes	Transmission System Engineering
No	No	Industrial Safety and Fire Protection	No	Yes	Visual Resources
Yes	Yes	Land Use	No	Yes	Waste Management
No	No	Project Overview	No	No	Alternatives

This report does not limit the scope of staff's analysis throughout this proceeding, but acts to aid in the analysis of potentially significant issues that the CECP proposal poses. The following discussion summarizes each potential issue, identifies the parties needed to resolve the issue, and where applicable, suggests a process for achieving resolution. At this time, staff does not see any of these potential issues as non-resolvable.

## **AIR QUALITY**

---

Staff reviewed the application for the CECP and found a potential air quality issue that could delay the Commission review process. It is not clear that the applicant's emission reduction credit (offset) mitigation for this project would result in the nonattainment pollutants and their precursors being offset at a minimum 1:1 basis. The applicant's offset mitigation proposal includes taking credit for shutting down the existing Encina Power Station Boilers 1, 2, and 3. It is unclear that cessation of the historic boiler emissions, per San Diego Air Pollution Control

District (District) new source review and/or emission banking rule requirements, would reduce the net facility emissions of Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) below District offset thresholds as stated in the AFC. Additionally, the recent year boiler emissions would not offset all of the project's nonattainment pollutant and their precursors emissions at a minimum 1:1 basis.

It is staff's long-standing mitigation position that all nonattainment pollutants and their precursors need to be offset at a minimum ratio of 1:1. The San Diego Air Basin in the area of the project site is classified as nonattainment for the state ozone, PM10 and PM2.5 standards and federal ozone standard. Without proper offset mitigation for NOx, VOC, PM10, and SOx, this project could contribute to existing violations of the state and federal ambient air quality standards. Staff is addressing the issue through data requests to the applicant.

## **LAND USE**

---

The city of Carlsbad sent an October 24, 2007 letter commenting on the CECP. The city's position is that the CECP Application for Amendment of the Encina Power Station Precise Development Plan and Specific Plan 144 (submitted to the City on September 17, 2007) does not meet the city's requirements for a comprehensive update as established in City Council Resolution 98-145. It is the city's position that a Specific Plan Amendment/Update of the entire 680-acre Encina Power Station site is required.

Some of the issues the city would want addressed in the Specific Plan Amendment/Update include:

- zoning designations that are inconsistent with the general plan;
- obsolete plans that do not show existing structures and improvements;
- Local Coastal Plan requirements that have not been addressed;
- street and other infrastructure improvements;
- the establishment of a future vision for the area that would enhance public access and increase open space; and
- considering the option of demolishing the existing power plant to construct a smaller one, thereby freeing up some additional beach-front property for public use.

The city also stated that the CECP would have to demonstrate compliance with other city of Carlsbad land use planning and policy documents. The city has expressed concern that the Application for Certification (AFC) does not contain enough information to determine project compliance with the Precise Development Plan, South Carlsbad Coastal Redevelopment Plan, Agua Hedionda Land Use Plan, and the Local Facilities Management Plan.

Based on the land use issues described by the city of Carlsbad, Energy Commission staff met with the city on November 30, 2007, to determine the exact scope of what the city would require of the applicant, were it the permitting agency. Staff notes that the city's requirement of the applicant to provide a comprehensive amendment/update of Specific Plan 144 could affect numerous technical areas including Noise, Traffic and Transportation, Cultural Resources, Visual Resources, Biology, Water Resources, Air Quality, Public Health, Soils, Waste Management, and Hazardous Materials, and would cause a significant time delay for the CECP.

## **SCHEDULING**

---

Timely resolution of the issues is critical to the schedule of this project. Staff's proposed 12-month schedule is below. The current high workload of siting cases is expected to continue in 2008 and may affect staff's ability to conclude the proceeding in twelve months.

### **PROPOSED SCHEDULE**

---

#### **CARLSBAD ENERGY CENTER PROJECT (07-AFC-6)**

<b>EVENT</b>	<b>DATE</b>
Applicant files Application for Certification (AFC)	9/14/07
Executive Director's recommendation on data adequacy	10/12/07
Decision on data adequacy at the business meeting	10/31/07
Staff files Data Requests	11/21/07
Staff files Issue Identification Report	12/10/07
Information hearing and site visit	12/17/07
Applicant provides data responses	12/21/07
Data request / response and issue resolution workshop	1/8/08
Local, state and federal agency draft determinations & SDAPCD PDOC	2/28/08
Preliminary Staff Assessment (PSA) filed	4/4/08
PSA workshop	4/15/08
Local, state and federal agency final determinations & SDAPCD FDOC	4/28/08
Final Staff Assessment filed	5/30/08
Evidentiary hearings*	TBD
Committee files proposed decision*	TBD
Hearing on the proposed decision*	TBD
Committee files revised proposed decision*	TBD
Commission Decision	11/1/08

\* The assigned Committee will determine this part of the schedule

## **STAFF TRANSITION**

---

James W. Reede, Jr., Ed.D, the current Project Manager for the CECP has accepted a position in the Energy Commission's Engineering Office. Mike Monasmith is the Energy Commission's new CECP Project Manager and will be making staff's presentation at the Informational Hearing.



**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  
(Est. 11/6/07)**

**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  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

**APPLICANT**

David Lloyd  
Carlsbad Energy Center, LLC  
1817 Aston Avenue, Suite 104  
Carlsbad, CA 92008  
[David.Lloyd@nrqenergy.com](mailto:David.Lloyd@nrqenergy.com)

Tim Hemig, Vice President  
Carlsbad Energy Center, LLC  
1817 Aston Avenue, Suite 104  
Carlsbad, CA 92008  
[Tim.Hemig@nrqenergy.com](mailto:Tim.Hemig@nrqenergy.com)

**APPLICANT'S CONSULTANTS**

Robert Mason, Project Manager  
CH2M Hill, Inc.  
3 Hutton Centre Drive, Ste. 200  
Santa Ana, CA 92707  
[Robert.Mason@ch2m.com](mailto:Robert.Mason@ch2m.com)

Megan Sebra  
CH2M Hill, Inc.  
2485 Natomas Park Drive, Ste. 600  
Sacramento, CA 95833  
[Megan.Sebra@ch2m.com](mailto:Megan.Sebra@ch2m.com)

**COUNSEL FOR APPLICANT**

John A. McKinsey  
Stoel Rives LLP  
770 L Street, Ste. 800  
Sacramento, CA 95814  
[jamckinsey@stoel.com](mailto:jamckinsey@stoel.com)

**INTERESTED AGENCIES**

Larry Tobias  
Ca. Independent System Operator  
151 Blue Ravine Road  
Folsom, CA 95630  
[LTobias@caiso.com](mailto:LTobias@caiso.com)

Electricity Oversight Board  
770 L Street, Suite 1250  
Sacramento, CA 95814  
[esaltmarsh@eob.ca.gov](mailto:esaltmarsh@eob.ca.gov)

**INTERVENORS**

**ENERGY COMMISSION**

JAMES D. BOYD  
Presiding Member  
[jboyd@energy.state.ca.us](mailto:jboyd@energy.state.ca.us)

JOHN L. GEESMAN  
Associate Member  
[jgeesman@energy.state.ca.us](mailto:jgeesman@energy.state.ca.us)

Paul Kramer  
Hearing Officer  
[pkramer@energy.state.ca.us](mailto:pkramer@energy.state.ca.us)

Public Advisor's Office  
[pao@energy.state.ca.us](mailto:pao@energy.state.ca.us)

James Reede  
Project Manager  
[jreede@energy.state.ca.us](mailto:jreede@energy.state.ca.us)

Dick Ratliff  
Staff Counsel  
[dratliff@energy.state.ca.us](mailto:dratliff@energy.state.ca.us)

### **DECLARATION OF SERVICE**

I, Terry Piotrowski, declare that on December 7, 2007, I deposited copies of the attached Carlsbad Energy Center Issues Identification Report in the United States mail at Sacramento, California 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 By  
Terry Piotrowski