

# Memorandum

Date: December 28, 2006  
Telephone: (916) 653-1850

To: Jeffrey D. Byron, Commissioner and Presiding Member  
John L. Geesman, Commissioner and Associate Member

From: California Energy Commission – Lorne C. Prescott  
1516 Ninth Street  
Sacramento, CA 95814-5512

Siting Project Manager



<b>DOCKET</b>	
<b>06-AFC-6</b>	
DATE	DEC 28 2006
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Subject: **EASTSHORE ENERGY CENTER ISSUE IDENTIFICATION REPORT (06-AFC-6)**

Attached is staff's Issue Identification Report for the Eastshore Energy Center. This report serves as a preliminary scoping document that identifies the issues the Energy Commission staff believes will require careful attention and consideration during the Energy Commission's review of the proposed project. We will discuss the issues identified in this report at the Committee's Informational Hearing and Site Visit scheduled for January 29, 2007.

This report also provides a proposed schedule for the review of the Eastshore Energy Center pursuant to a 12-month Application for Certification review.

Attachment

cc: Docket (06-AFC-6)  
Proof of Service List

Proof of Service List (Revised on 12/28/06)  
filed with Original Document. Mailed from  
Sacramento on 12/28/06.

# **Issue Identification Report**

## **Eastshore Energy Center (06-AFC-6)**

**December 2006**

**CALIFORNIA ENERGY COMMISSION**

**Energy & Facilities Siting Division**

**Lorne C. Prescott  
Project Manager**

**ISSUE IDENTIFICATION REPORT  
EASTSHORE ENERGY CENTER  
(06-AFC-6)**

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## **PURPOSE OF REPORT**

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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. Issues are identified as a result of discussions with federal, state, and local agencies and our review of the Eastshore Energy Center Application for Certification (AFC), Docket Number 06-AFC-6. This Issue Identification Report contains a project description, summary of potential major issues, and a discussion of the proposed project schedule. Staff will address the status of potential issues and progress towards their resolution in periodic status reports to the Committee.

## **PROJECT DESCRIPTION**

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On September 22, 2005, Eastshore Energy, LLC (EEC), a wholly-owned subsidiary of Tierra Energy, filed an AFC with the Energy Commission seeking approval to construct and operate a simple-cycle power plant, the Eastshore Energy Center (EEC), in the City of Hayward. EEC provided a supplement to the AFC on October 31, 2006 to address data inadequacies. On November 8, 2006, the Energy Commission accepted the AFC with the supplemental information as complete.

The proposed Eastshore site is located at 25101 Clawiter Road in the City of Hayward, Alameda County, in an area zoned for industrial uses. The project site is a 6.22-acre parcel owned by Eastshore Energy. A large industrial building and asphalt pavement currently occupy the parcel. The site is currently being leased by Eastshore Energy to third parties for general warehousing, but all leases will be terminated in fall 2007, prior to the commencement of construction. Construction of the Eastshore project would include demolition of the existing building, foundation and paved surfaces. A 4.65-acre area owned by Berkeley Farms located across Clawiter Road will be leased to Eastshore Energy for temporary construction and laydown during the construction and commissioning period.

The proposed 115.5 megawatt generating facility would consist of 14 Wartsila 20V34SG natural gas-fired reciprocating engine generators and associated equipment. The Eastshore project is designed as a peaking facility to meet electric generation load during periods of high demand, which generally occur during daytime hours, and more frequently during the summer than other portions of the year. The project is expected to have an annual capacity factor of approximately 45 percent, depending on weather-related customer demand, load growth, hydroelectric supplies, generating unit retirements and replacements, the level of generating unit and transmission outages, and other factors.

Air emissions from the proposed facility would be controlled using best available control technology applied to each engine's exhaust. Each system would consist of a selective catalytic reduction unit for oxides of nitrogen (NOx) control and an oxidation catalyst unit for carbon monoxide (CO) and precursor organic compounds (POC) control. Final permitting by the Energy Commission would reflect conformance with rules and

regulations of the Bay Area Air Quality Management District (BAAQMD) and include the issuance of a Determination of Compliance from the BAAQMD.

The Eastshore facility would use approximately 1.6 acre-feet of potable water per year for engine cooling and other power plant processes, site landscape irrigation and potable and sanitary uses. A closed loop engine cooling system would consume approximately 1.0 gallon per minute during plant operation. The City of Hayward would supply potable water for the project through an existing connection immediately adjacent to the project site under a contract with the City of San Francisco's Public Utilities Department.

Sanitary wastewater would be discharged to the Hayward city sewer system via an existing onsite sewer connection. Process wastewater would be tested for potential contamination, and under normal conditions, would also be discharged to this sanitary sewer line. If the wastewater composition is determined to exceed the City of Hayward's allowable discharge limits, it would be transported off site for treatment and disposal.

The Eastshore facility would be connected to Pacific Gas & Electric's (PG&E) electrical system at the existing Eastshore Substation which is located approximately 1.1 miles south of the project site. This connection will require a 1.1 mile new single circuit overhead 115-kilovolt (kV) line that will be placed in an existing PG&E 12-kV distribution corridor. The connection may also require widening the existing right of way and replacing 10 to 12 transmission poles with structures designed to accommodate both the existing 12-kV and new 115-kV transmission lines.

Natural gas would be supplied to the Eastshore facility via a 200-foot pipeline connection to PG&E's Pipeline 153 that is on the opposite side of Clawiter Road from the Eastshore site.

Assuming the Eastshore facility receives a license from the Energy Commission by December 2007, construction of the project would start in early spring 2008 and continue for approximately 18 months. Plant testing and commercial operation are scheduled to begin during the latter months of 2008. Full operational capability is anticipated by May 2009.

## **POTENTIAL MAJOR ISSUES**

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This portion of the report contains a discussion of the potential major issues the Energy Commission staff has identified to date. This report may not include all the major issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the major issues contained in this report is based on Energy Commission staff's judgment of whether any of the following circumstances will occur:

- Significant impacts may result from the project that may be difficult to mitigate;

- The project as proposed may not comply with applicable laws, ordinances, regulations or standards (LORS);
- Conflicts may arise between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay in the schedule.

The following table lists all the subject areas evaluated and notes those areas where major issues have been identified and if data requests are needed. Although an area is identified as having no major 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.

<b>Subject Area</b>	<b>Major Issue(s)</b>	<b>Data Requests</b>
Air Quality	Yes	Yes
Alternatives	No	No
Biological Resources	No	Yes
Cultural Resources	No	Yes
Facility Design	No	No
Geology and Paleontology	No	Yes
Hazardous Materials Handling	No	Yes
Land Use	No	No
Noise and Vibration	No	No
Public Health	No	Yes
Power Plant Efficiency	No	No
Power Plant Reliability	No	No
Socioeconomics	No	No
Soil and Water Resources	No	Yes
Traffic and Transportation	No	No
Transmission Line Safety and Nuisance	No	No
Transmission System Engineering	No	Yes
Visual Resources	No	Yes
Waste Management	No	No
Worker Safety and Fire Protection	No	Yes

## **AIR QUALITY**

Eastshore Energy Center would be located in the Bay Area Air Quality Management District (BAAQMD or Air District) where particulate matter occurs at levels that exceed the ambient air quality standards.

### ***IMPACTS GREATER THAN NEW FEDERAL PM2.5 STANDARD***

The U.S. EPA recently revised the national ambient air quality standards (NAAQS) for particulate matter less than 2.5 micrometers (PM2.5) downward to 35 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) 24-hour average concentration (see Federal Register Vol. 71, No. 200, p. 61144, October 17, 2006; effective December 18, 2006). The previous standard was 65  $\mu\text{g}/\text{m}^3$ . Table 8.1-34 of the AFC shows that the project would cause a maximum impact of roughly 50  $\mu\text{g}/\text{m}^3$  PM2.5 over a 24-hour averaging period from direct emissions of PM2.5. Because this project impact would exceed the new NAAQS, the project appears to cause a direct violation of the standard. This would be a significant impact that may be difficult to fully mitigate. Project-related emissions of other pollutants that are precursors to PM2.5 would exacerbate the direct impact by reacting in the atmosphere to form additional, indirect PM2.5 that would add to the project's potentially significant impact.

### ***BEST AVAILABLE CONTROL TECHNOLOGY FOR PM10 AND PM2.5***

Emissions of particulate matter less than 10 micrometers (PM10) must be limited to comply with Air District Rule 2-2-301, regarding Best Available Control Technology (BACT). The proposed maximum hourly PM10/2.5 emission rate of 2.43 lb/hr (AFC Table 8.1-4) would be roughly equivalent to 0.095 grams-per-brake horsepower-hour (g/bhp-hr). Although the applicant proposes to achieve BACT by using strictly pipeline-quality natural gas, the AFC does not quantify a BACT level for PM10 (AFC Section 8.1.4.5). The California Air Resources Board and other air districts show that a PM10 level of 0.02 g/bhp-hr is "achieved in practice" for natural gas-fueled reciprocating engines under 50 MW, such as those proposed for Eastshore. It is not known whether the Air District will require the project to meet the 0.02 g/bhp-hr level. Staff has provided data requests regarding the applicant's PM10 and PM2.5 emission assumptions.

### ***MITIGATION OF PM10 AND PM2.5 IMPACTS***

The Air District will not require Eastshore to offset the proposed emissions of PM10 and PM2.5 because they are projected to be under the 100 ton per year regulatory threshold. However, as the CEQA lead agency, the Energy Commission is required to address any potentially significant impact of the emissions and identify appropriate mitigation options. Staff considers this impact to be potentially significant because it causes a violation and contributes to the existing non-attainment status of the air basin. The applicant proposes to mitigate the impacts during the fall and winter season, but staff is concerned that the proposed level of mitigation would not be adequate to offset or reduce impacts caused by year-round PM10/PM2.5 emissions. Eastshore may not be able to ensure that emission reductions on a seasonal basis offset the impacts of project operation because emission reduction credits are issued on an annual average basis within this Air District, meaning they cannot be certified on a seasonal basis as

they can be in other parts of California. Because the project does not include any proposed limitation on seasonal operation, there would be no way to ensure that project emissions are not unevenly biased to occur in the winter months. Ultimately, the applicant and staff must agree on a mitigation approach that addresses the year-round impacts of the PM10/PM2.5 emissions and emissions of precursors (e.g., sulfur oxides). Staff has provided data requests to explore mitigation options beyond those initially proposed by the applicant.

### **AMMONIA SLIP LIMITS**

Ammonia is a State-designated toxic air contaminant and a precursor to PM2.5 formed in the atmosphere downwind. The applicant's proposal is to limit ammonia slip emissions to 20 parts per million by volume dry basis (ppmvd), a level that could result in nearly 55 tons per year of ammonia emissions (AFC Appendix 8.1A). Aside from health risk considerations, which will be discussed in the Public Health and Hazardous Materials sections of the staff assessment, staff believes that the project should control ammonia emissions to minimize contributions to violations of the federal and state PM2.5 standards. Although the California Air Resources Board recommends a level of 10 ppmvd, it is not known whether the Air District will consider an ammonia slip limit more stringent than 20 ppmvd. Staff has provided data requests to investigate possible design options for achieving less than 10 ppmvd ammonia slip.

### **SCHEDULING ISSUES**

Staff has begun its analyses of the environmental and engineering aspects of the applicant's proposed project and is currently in the discovery phase.

Following is staff's proposed 12-month schedule for key events of the project. The ability of staff to be expeditious in meeting this schedule will depend on: Eastshore Energy's timely response to staff's data requests; clarifying and reaching agreement on an emission reductions and mitigation for PM10/PM2.5 and ammonia slip, the timing of the Air District's filing of the Determination of Compliance; determinations by other local, state and federal agencies; and other factors not yet known.

## STAFF'S PROPOSED SCHEDULE

### Staff's Proposed Schedule for the Eastshore Energy Center Project (06-AFC-6)

	Activity	Day	Calendar Day
1	Applicant filed Application for Certification (AFC)	-	22-Sep-06
2	Executive Director's recommendation on data adequacy	-	1-Nov-06
3	Decision on data adequacy at business meeting	0	8-Nov-06
5	Staff files data requests (round1)	37	15-Dec-06
4	Staff files Issue Identification Report	51	29-Dec-06
8	Staff files data requests, (round 2, if necessary)	65	12-Jan-07
6	Applicant provides data request responses (round 1)	68	15-Jan-07
7	Data response and issue resolution workshop	82	29-Jan-07
9	Information hearing, site visit	82	29-Jan-07
10	Applicant provides data responses (round 2, if necessary)	96	12-Feb-07
11	Data response and issue resolution workshop (round 2, if necessary)	110	26-Feb-07
12	Local, state, and federal agency draft determinations (e.g., Preliminary Determination of Compliance from BAAQMD))	120	8-Mar-07
13	Preliminary Staff Assessment filed	152	9-Apr-07
14	Preliminary Staff Assessment workshops	170-180	Early May
15	Local, state, and federal agency final determinations (e.g., Final Determination of Compliance from BAAQMD)	180	7-May-07
16	Final Staff Assessment filed	210	6-Jun-07
17	Prehearing Conference	215	June 11, 2007*
18	Evidentiary hearings	220-240	Late June 2007*
19	Presiding Member's Proposed Decision (PMPD)	305	September 9, 2007*
20	Committee Conference on PMPD	335	October 9, 2007*
21	Energy Commission Hearing--Final Decision	365	November 8, 2007*

\* Items 17 through 21 are scheduled by the Committee assigned to Eastshore

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

**APPLICATION FOR CERTIFICATION  
FOR THE EASTSHORE POWER  
PLANT PROJECT**

**Docket No. 06-AFC-6  
PROOF OF SERVICE**

**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. 06-AFC-6  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
[doCKET@energy.state.ca.us](mailto:doCKET@energy.state.ca.us)

**APPLICANT**

Greg Trewitt, Vice President  
Tierra Energy, Inc  
710 S. Pearl Street, Suite A  
Denver, Colorado 80209  
[greg.trewitt@tierraenergy.com](mailto:greg.trewitt@tierraenergy.com)

Jennifer Scholl  
Senior Program Manager  
CH2M HILL  
610 Anacapa Street, Suite B5  
Santa Barbara, CA 93101  
[jscholl@ch2m.com](mailto:jscholl@ch2m.com)

Harry Rubin, Executive Vice President  
RAMCO Generating Two  
1769 Orvieto Drive,  
Roseville, CA 95661  
[hmrenergy@msn.com](mailto:hmrenergy@msn.com)

**COUNSEL FOR APPLICANT**

Theodore Matula  
Vice President and General Counsel  
Tierra Energy  
7000 North Mopac, Suite 475  
Austin, Texas 78731  
[theodore.matula@tierraenergy.com](mailto:theodore.matula@tierraenergy.com)

**APPLICANT'S CONSULTANTS**

David A. Stein, PE  
Vice President  
CH2M HILL  
155 Grand Avenue, Suite 1000  
Oakland, CA 94612  
[dstein@ch2m.com](mailto:dstein@ch2m.com)

Jane Luckhardt, Partner  
Downey Brand Attorneys LLP  
555 Capitol Mall, 10th Floor  
Sacramento, California 95814  
[jluckhardt@downeybrand.com](mailto:jluckhardt@downeybrand.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)

City Manager, Jesus Armas  
City of Hayward  
777 B Street  
Hayward, California 94541  
[JesusA@hayward-ca.gov](mailto:JesusA@hayward-ca.gov)

Mayor Michael Sweeney  
City of Hayward  
777 B Street  
Hayward, California 94541  
[michael.sweeney@hayward-ca.gov](mailto:michael.sweeney@hayward-ca.gov)

**INTERVENORS**

**ENERGY COMMISSION**

JEFFREY D. BYRON  
Presiding Member  
[jbyron@energy.state.ca.us](mailto:jbyron@energy.state.ca.us)

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

Susan Gefter  
Hearing Officer  
[sgefter@energy.state.ca.us](mailto:sgefter@energy.state.ca.us)

Lorne Prescott  
Project Manager  
[lprescot@energy.state.ca.us](mailto:lprescot@energy.state.ca.us)

Caryn Holmes  
Staff Counsel  
[cholmes@energy.state.ca.us](mailto:cholmes@energy.state.ca.us)

Margret Kim  
Public Adviser  
[pao@energy.state.ca.us](mailto:pao@energy.state.ca.us)

**DECLARATION OF SERVICE**

I, Geoffrey W. Carter, declare that on December 28, 2006, I deposited copies of the attached Eastshore Energy Center Issue Identificaiton 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.

