STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:	)	Docket No. 06-AFC-6
	)	
Application for Certification for the	)	
Eastshore Energy Center in Hayward	)	
by Tierra Energy of Texas	)	
	)	

DOCKET
06-AFC-6
DATE FEB 11 2008
RECD. FEB 11 2008

Staff's Opening Brief

Caryn J. Holmes, Staff Counsel IV
California Energy Commission
1516 9th St.
Sacramento, CA 95814

Ph: (916) 654-4178
Fax: (916) 654-3843
E-mail: cholmes@energy.state.ca.us

February 11, 2008

PROOF OF SERVICE (REVISED 1/18/08) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 2/11/08
C Hong

TABLE OF CONTENTS

Page

INTRODUCTION 1

ARGUMENT 2

I. AIR QUALITY 2

A. The EEC will Conform with All Applicable Air Quality Requirements 2

B. The EEC's Significant Adverse Impacts to Air Quality will be Fully Mitigated. 3

1. Most of the EEC's Significant Adverse Air Quality Impacts Are Mitigated by Requirements Contained in the Final Determination of Compliance, and Incorporated into Staff's Proposed Conditions of Certification. 3

2. Impacts Not Addressed by the BAAQMD's DOC Are Fully Mitigated by Staff's Proposed Conditions of Certification AQ-SC 1-AQ-SC 12. 4

a. Interveners Failed to Demonstrate that the Woodstove Replacement Program will be Ineffective in Preventing Air Quality Impacts. 4

b. The Applicant's Suggested Changes to AQ-SC-8 will not Provide Sufficient Confidence that Air Quality Impacts Will be Fully Mitigated. 5

II. PUBLIC HEALTH 7

A. Staff's Highly Conservative Public Health Analysis, Demonstrates that the EEC Project Will Not Create a Significant Adverse Health Impact. 7

Page

B. The County of Alameda Was Unfamiliar with the Staff Testimony and Did Not Offer Any Persuasive Evidence that the Staff Analysis Is Flawed. 8

III. ENVIRONMENTAL JUSTICE 9

IV. Traffic and Transportation 13

A. Avoiding the Hazard Created by the Project's Thermal Plumes Will Require Measures that Create a Risk that Constitutes a Significant Adverse Impact. 13

1. The Record Contains Indisputable Evidence that Aircraft Fly in the Vicinity of the Project at Altitudes Below 1000 Feet AGL. 13

B. The Hazard Associated with Thermal Plumes Has Led the FAA to Recommend Avoiding Overflight. 14

C. Imposition of an Overflight Restriction Will Diminish Available Airspace and Complicate Aircraft Maneuverability, Creating Both a Significant Adverse Direct Impact and an Incremental Effect that is Cumulatively Considerable 14

D. The Hazard and Constraints on Airport Utility Caused by the Project's Thermal Plumes Create an Inconsistency with Several Sections of the Hayward Municipal Code and the Alameda County Airport Use Policy Plan. 15

V. Land Use 16

A. The EEC is Consistent With the Express Goals and Policies Articulated in the Hayward General Plan. 16

Page

B. The EEC's Thermal Plumes Create an Aviation Safety Hazard Which Renders the Project Inconsistent with Various Discretionary Determinations Mandated Pursuant to the Zoning Ordinance contained in Article 1 of Chapter 10 of the City of Hayward's Municipal Code. 17

1. General Provisions (§ 10-1.100 et seq.) 17

2. Industrial District Requirements (§ 10-1.1600 et seq.) 18

3. Conditional Use Permit (§ 10-1.3100 et seq.) 18

C. Airport Approach Zoning Regulations (§ 10-6.00 et seq.) 19

D. Airport Land Use Policy Plan 19

VI. Local System Effects 20

VII. Alternatives 21

VIII. Noise 22

CONCLUSION 24

ATTACHMENT 1 i

STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:	)	Docket No. 06-AFC-6
	)	
Application for Certification for the	)	
Eastshore Energy Center in Hayward	)	
by Tierra Energy of Texas	)	
	)	

INTRODUCTION

On January 14, 2008, the Eastshore Energy Center (EEC) AFC Committee (Committee) issued a Committee Order directing parties to file Opening Briefs on February 11, 2008, addressing environmental issues and identifying laws, ordinances, regulations, and standards (LORS) that would be violated should the project be permitted as proposed. This is Staff's Opening Brief, addressing the following areas:

- Air Quality
- Public Health
- Environmental Justice
- Traffic and Transportation
- Land Use
- Local System Effects
- Alternatives
- Noise

ARGUMENT

I. AIR QUALITY

A. The EEC will Conform with All Applicable Air Quality Requirements.

The Bay Area Air Quality Management District (BAAQMD), as the district in which the project is located, has the responsibility of preparing a determination of compliance (DOC) addressing whether the proposed facility meets the requirements of the applicable district regulations. (Cal. Code Regs., tit. 20, § 1744.5.) The BAAQMD provided a determination of compliance on October 23, 2007, which was received into evidence on December 17, 2007, as Exhibit 201. The BAAQMD concluded that the project would comply with applicable federal, state, and BAAQMD regulations, including Best Available Control Technology (BACT) requirements and emission offset requirements of the BAAQMD's new source review regulation. (Exh. 201, p. 1.)

The only party who appears to have challenged this conclusion was intervener Robert Sarvey. Mr. Sarvey stated that the project would not comply with BAAQMD's Rule 2-2-301, which establishes the BAAQMD BACT requirements. He claimed that lower emission limits for particulate matter of less than or equal to 10 microns in diameter and 2.5 microns in diameter (PM10/PM2.5) have been achieved in practice for a facility permitted by the San Joaquin Valley Air Pollution Control District. Intervener Sarvey's assertions ignore the detailed discussion of this issue that is contained in the DOC. After reviewing the data from 22 source tests, the BAAQMD determined that the emission rate specified in the DOC would clearly be achievable, with a compliance margin. (Exh. 201, p. 15.) The BAAQMD considered the permit limit referred to by Intervener Sarvey in its evaluation, but found that such a permit limit should not be BACT for EEC because it is based on limited test data and includes no compliance margin. (*Ibid.*) Not only is BAAQMD's determination reasonable, but the Commission has no authority to reject its BACT determination. (Cal. Code Regs., tit. 20, §§ 1744.5, 1752.3.) Mr. Sarvey's contention is without merit and should be rejected.

In addition, the County of Alameda challenged the modeling results of the "relevant reports and documents" (Exh. 500, p. 1) provided by the BAAQMD. Its witness, Dr. Paolo Zannetti raised a number of questions on pages 6 – 9 of his testimony regarding the use of Selective Catalytic Reduction (SCR) and ammonia handling, but failed to point to any errors in the staff, BAAQMD, or Applicant

testimony in this regard. In fact, Dr. Zannetti's statement that "there is sparse history of use of SCR in the United States" (Exh. 500, p. 5) indicates a complete lack of familiarity with projects licensed by the California Energy Commission (Commission).

In addition, Dr. Zannetti testified that the modeling approach used to estimate project 1-hour NO2 impacts may be flawed because constant stack parameters are assumed for the entire hour. (*Id.* at p. 10) Dr. Zannetti performed his own modeling analysis, in which he modeled four 15-minute increments, rather than an entire hour and reached different results than were presented by the applicant. (*Ibid.*) However, Dr. Zannetti conceded on cross-examination that he didn't know whether the modeling technique he used is consistent with the BAAQMD's modeling guidelines. (RT 12/17/08, p. 150, lines 8-10.) The BAAQMD itself testified that the full one-hour period should be modeled, with the inputs for that one hour depending on the conditions that would occur during that one hour. (*Id.* at p. 161, lines 23-25.)

In sum, a careful review of the evidence adduced at the hearing supports a conclusion that the EEC will comply with all applicable LORS, including air quality LORS. As a result, staff urges the Committee to make a finding in the Presiding Member's Proposed Decision (PMPD) consonant with that conclusion.

B. The EEC's Significant Adverse Impacts to Air Quality will be Fully Mitigated.

1. Most of the EEC's Significant Adverse Air Quality Impacts Are Mitigated by Requirements Contained in the Final Determination of Compliance, and Incorporated into Staff's Proposed Conditions of Certification.

The BAAQMD's DOC contains a number of requirements that ensure that the EEC's emissions are as low as possible and that residual emissions are mitigated through the use of emission reduction credits (ERCs). Because of these requirements, most of the air quality impacts associated with the project are fully mitigated.[1] Although a number of people offering public comment expressed skepticism about the effectiveness of ERCs, staff explained in its testimony that

[1] As discussed below, those impacts that are not addressed in the DOC were evaluated by staff, and will be fully mitigated through implementation of staff's proposed conditions of certification AQ-SC 1 – AQ-SC 12.

control measures (such as ERCs) have created substantial progress in ameliorating ambient pollution, generating air quality improvements in the Bay Area. (Exh. 200, p. 4.1-5.) The BAAQMD offered testimony explaining that each ERC used represents a reduction in the amount of pollution that is emitted, both in terms of the amount of ERCs that are granted when the a facility shuts down and in the amount of ERCs that are required when a new facility commences operation. (RT 12/17/07, p. 157, line 24 – p. 158, line 12.) As a result, staff supports the use of ERCs to mitigate project emission impacts, a position that is also reflected in all Commission licensing decisions.

2. Impacts Not Addressed by the BAAQMD's DOC Are Fully Mitigated by Staff's Proposed Conditions of Certification AQ-SC 1 – AQ-SC 12.

Notwithstanding the requirements of the DOC, there are some impacts for which the BAAQMD does not require ERCs. For those impacts, staff recommends mitigation beyond that contained in the DOC. Specifically, staff recommends implementation of mitigation to reduce construction impacts (AQ-SC 1 – AQ-SC 6) and impacts associated with both primary and secondary PM10/PM2.5 (AQ-SC – 8). Other staff conditions include procedural requirements and requirements for the reporting of greenhouse gas emissions. AQ-SC 8 was challenged by both the applicant and interveners.

a. Interveners Failed to Demonstrate that the Woodstove Replacement Program will be Ineffective in Preventing Air Quality Impacts.

In order to address the project's direct particulate matter emission impacts, staff recommends requiring EEC to offset 20.4 tons per year of PM10 emissions, either through the implementation of a fireplace and woodstove replacement program or the surrender of ERCs. (Exh. 200, p. 4.1-26.) For secondary particulate matter impacts (caused by the project's emission of particulate precursor pollutants), staff recommends requiring EEC to offset 3 tons per year of SO_2 emissions.[2] (*Id.* at p. 4.1-27.) Staff proposes allowing the applicant to use SO_2 ERCs in lieu of PM10 ERCs at an interpollutant trading ratio of 5.3-to-1. (*Ibid.*) Intervener Sarvey filed testimony challenging the sufficiency of the woodstove replacement program, stating that no conclusion about its efficacy could be reached without an

[2] The impact of the project's NOX and POC emissions on secondary particulate are mitigated by the surrender of NOX and/or POC ERCs required pursuant to the DOC.

identification of the woodstove retrofits that would occur and an air quality impact analysis. (Exh. 700, p. 4.) Members of the public echoed his concerns.

Staff acknowledges that the emission reductions associated with a woodstove replacement program are different than those achieved with ERCs. They are reductions of emissions that would otherwise continue, unregulated by the BAAQMD (RT 12/17/07, p. 42, lines 15-19), while ERCs are reductions of past emissions at regulated sources. Also, the level of detail required to create ERCs pursuant to state and federal law is very high. However, the law does not require ERCs for the project's PM10/PM2.5 emissions. (Exh. 200, p. 4.1-25.) To the extent project emissions create significant adverse impacts, the California Environmental Quality Act or CEQA (Pub. Resources Code § 21100 et seq.) requires that they be mitigated or avoided if feasible. (Pub. Resources Code § 21081.) CEQA does not require that air quality impacts be mitigated through the use of ERCs. In this case, staff has identified that there are more than 1,200 tons per year of fireplace particulate matter emissions (3.44 tons per day of PM2.5 emissions and 3.57 tons per day of PM10 emissions) from fireplaces in Alameda County alone. (Exh. 200, p. 4.1-13, Table 9.) The amount of credit per retrofit is specified in the staff's proposed condition of certification (Exh. 200, p. 4.1-46.), and no party presented any evidence indicating that those amounts are in error.

Therefore, there appears to be a significant opportunity for reducing fireplace emissions. And, in order to ensure that local air quality benefits from this program are maximized, staff has required that the fireplace retrofits be offered exclusively to Hayward residents for the first twelve months of the program, only allowing residents of neighboring communities to take advantage of the program after that time. (*Ibid.*) Moreover, a phased implementation of the program, with all of the retrofits installed within two years of the start of construction will ensure that the emission reductions are in place prior to the operation of the EEC. (*Ibid.*) Staff believes that these requirements are sufficient to ensure that the project's particulate matter impacts will be fully mitigated, and urges the Committee to make that finding in the PMPD.

b. The Applicant's Suggested Changes to AQ-SC 8 will not Provide Sufficient Confidence that Air Quality Impacts Will be Fully Mitigated.

The applicant also challenged two aspects of staff's proposed mitigation for particulate matter impacts: the requirement that any ERCs surrendered for Condition of Certification AQ-SC 8 be located upwind of the project, and the

offset ratio that would be applied should the applicant choose to substitute SO_2 ERCs for PM10 ERCs. These issues are discussed below.

The location of the offsets as specified in the Staff's proposed condition of certification is important. As the BAAQMD testified, particulate matter impacts can be both local and regional. (RT 12/17/07, p. 156, line 25.) In order to ensure that local as well as the regional impacts are mitigated, staff recommends that the ERCs that are provided be upwind of the facility. (Exh. 200, p. 4.1-26.) The applicant, on the other hand, wishes to retain the flexibility to obtain the offsets from any location within the BAAQMD, if obtaining ERCs from the local area is infeasible. (Exh. 15, pp. 1-2.) The definition of the area from which ERCs can be obtained is large and provides broad flexibility for the applicant. (RT 12/17/07 p. 29, lines 8-11.) Staff believes that the wording of the condition as proposed by staff will encourage the most diligent of efforts to obtain upwind offsets and opposes relaxing it. Should staff's belief about the availability of offsets within that large area be in error and upwind offsets in fact be infeasible, the applicant retains the flexibility to return to the Commission and seek a modification of the condition.

The applicant also challenged the ratio that would be applied should the applicant choose to substitute SO_2 ERCs for PM10 ERCs. Staff testified that its recommended ratio of 5.30-to-1 is appropriate for use at Eastshore because it is derived from the most locally-relevant data. (RT 12/17/07, p. 162, lines 13-15.) Additionally, it uses a method that is not in dispute. This method is identified in an appendix to the air quality testimony (Exh. 200, p.4.1-66) and the applicant itself used a very similar method for computing its ratio. (RT 12/17/07, p. 162, lines 8-13, 16-19.) Finally, staff notes that the ratio was considered and agreed to by all the air quality experts in the Russell City Energy Center (RCEC) amendment recently approved by the Commission (01-AFC-7C).

As staff explained at the evidentiary hearings, the staff ratio differs from that of the applicant in that it is based on actual air quality monitoring results from only San Francisco, San Pablo, and Concord. These are the locations near Hayward with available data, and they represent the "inner San Francisco Bay Area". (RT 12/17/07 p. 30, lines 2-16, Exh. 200, p. 4.1-66.) Data from more distant stations, as the applicant uses, is not relevant, given staff's objective of ensuring that AQ-SC 8 provide a high level of local benefits. The applicant attempts to justify its proposed 3-to-1 ratio by including ambient data from sites more than 40 miles from Hayward (Exh. 15, Attachment 2), as well as by including data from Christmas Day 2006 as one of its three days. This day significantly lowers the

ratio, is not representative of normal conditions due to fewer stationary and mobile source emissions, and should not be used. In sum, the applicant's analysis reflects neither local nor typical conditions. It should be rejected, and the staff ratio, which was uncontested and approved by the Commission in the RCEC proceeding should be incorporated in the conditions of certification for the EEC facility.

II. PUBLIC HEALTH

A. Staff's Highly Conservative Public Health Analysis, Demonstrates that the EEC Project Will Not Create a Significant Adverse Health Impact.

Staff's public health analysis, which complies with directives from the California Office of Environmental Health Hazard Assessment and the California Air Resources Board, is oriented towards the protection of public health, and takes into account the most sensitive individuals in the population. (Exh. 200, p. 4.7-5.) Using extremely conservative assumptions, staff's analysis demonstrates that members of the public affected by the non-criteria pollutant emissions of this project -- including sensitive receptors such as the elderly, infants, and people with pre-existing medical conditions -- will not experience any acute or chronic significant health risk, or any significant cancer risk as a result of that exposure. A partial list of the conservative assumptions staff incorporated into its analysis is found on page 4.7-5 of Exhibit 200. In addition to those assumptions, the reference exposure levels for chronic and acute health hazards used by staff contain margins of safety. Staff also applied the cancer risk significance level in a very conservative manner. (Exh. 200, pp. 4.7-6, 4.7-7.) All the evidence in the record demonstrates that staff incorporated every conservative assumption called for by state and federal agencies responsible for establishing methods for analyzing public health impacts. The results of that analysis indicate that there would be no direct or cumulative significant public health impact. (*Id.* at pp. 4.7-12, 4.7-17.) In sum, staff is confident that the only conclusion that can be drawn from the evidence in this proceeding is that the project's non-criteria pollutant emissions will not create significant adverse health risks or risk of cancer.[3]

---

[3] Staff notes that Dr. Greenberg's answer to Ms. Luckhardt on p. 261 of RT 12/17/08 should have been in the affirmative; the formaldehyde emissions from source tests shown in Exhibit 804 are one order of magnitude greater than the emissions assumed by Dr. Greenberg in his Health Risk Assessment. This correction has no effect on staff's conclusions.

B. The County of Alameda Was Unfamiliar with the Staff Testimony and Did Not Offer Any Persuasive Evidence that the Staff Analysis Is Flawed.

Although members of the public expressed a great deal of concern about the potential health impact of the project during the public comment period, only one other party besides staff and the applicant presented testimony on public health. Dr. Sandra Witt, the Director of Planning, Policy, and Health Equity for the Alameda County Health Department provided written testimony concerning the staff assessment and the project's potential impact on public health. She challenges the staff analysis as a "cursory three-page [assessment]", apparently referencing the "Environmental Justice" section of the staff testimony -- which contains a statement of the conclusions of the analysis for all technical areas – not the public health testimony, raising questions as to whether she had even read staff's public health analysis. (Exh. 532, p. 2.) Dr. Witt did not testify that any of the steps taken by staff in its analysis were flawed or failed to follow regulatory guidance.

Instead, she states that the area that will be affected by the power plant already suffers from higher death and hospitalization rates due to air-pollution-associated diseases than the County as a whole, and that this fact should be factored into the licensing decision for the project. (Exh. 532, p. 3.) Interestingly enough, in this discussion, Dr. Witt refers to the local population as "sensitive receptors" referencing the Air Toxics Hot Spots Program Risk Assessment Guidelines. (*Id.* at p. 3.) However, she was apparently unaware that the method used by staff to assess health risks is designed to identify health risks assuming *all* members of the population are sensitive receptors. (RT 12/17/07, p. 267, lines 23-25, p. 268, line 1.) In other words, assuming that Dr. Witt's characterization of the local population is accurate – and staff has no reason to assume otherwise – staff's testimony clearly supports a conclusion that this project will not create significant public health impacts to the sensitive receptors in the population.

Dr. Witt also challenges the use of standard health risk assessment methods to identify potential public health impacts. She states that exposure to multiple pollutants may have synergistic effects and that the use of animal toxicity data to establish thresholds for human exposure may be flawed. (Exh. 532, p. 4-5.) Staff addresses the possibility of synergistic effects in its Public Health analysis; in fact the staff witness was a member of the United States Environmental Protection Agency Workgroup on Cumulative Risk Assessment. (Exh. 200, Qualifications of Dr. Greenberg, p. 2.) Staff agrees that exposure to multiple toxic substances may

result in health effects that are different than exposure to the individual substances. These effects may be synergistic or antagonistic, but in any event, there is no precise way to estimate the effects of exposure to multiple pollutants. (Exh. 200, p. 4.7-6.) Staff explains that this is the reason that the methods approved by regulatory agencies for assessing public health impacts all call for a margin of safety. (*Ibid.*) Staff has incorporated these margins along with other conservative assumptions, which are identified on page 4.7-5 of the Exhibit 200, in its analysis.

In conclusion, staff's assessment, as presented in its testimony, shows that this project's non-criteria pollutant emissions will not create significant public health risks for the population. In reaching this conclusion, we are not dismissing the genuine concern of community members about existing public health issues in the community. However, the best scientific tools we have available to evaluate public health risk tell us that, even when exposure to the project's emissions are grossly overestimated, no significant health risk will occur.[4]

III. ENVIRONMENTAL JUSTICE

Environmental justice arose as a concept when various studies conducted in the 1990's indicated that land use decisions in many places resulted in greater environmental risks for low income communities and communities of people of color than for other communities. In response, then-President Clinton issued Executive Order 12898 on February 11, 1994, calling on federal agencies to identify and address "disproportionately high and adverse human health and environmental effects on minority populations and low-income populations in the United States. . . " The United States Environmental Protection Agency (U.S. EPA) led an interagency effort to carry out the executive order. In 1998, U.S. EPA issued guidance for federal agencies conducting analyses under the National Environmental Protection Act (NEPA) entitled "Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analysis" (EPA Final Guidance). This document followed, and was explicitly designed to supplement, the Council on Environmental Quality's "Environmental Justice Guidance Under the National Environmental Policy Act." (EPA Final Guidance, § 1.2.2.) Although there are no legally binding state or federal guidelines that

[4] At the December 17, 2007 hearing, Hearing Officer Gefter asked whether the non-criteria air pollution testing requirements proposed by the BAAQMD, staff, and the applicant could be reconciled. Staff has consulted with the BAAQMD and concluded that they cannot but offers Public Health-1 (Attachment 1) as an alternative to Public Health -1 contained in the Final Staff Assessment. (Exh. 200.)

direct the Energy Commission's environmental justice analysis, staff's Environmental Justice analysis in all cases, including the EEC proceeding, is consistent with U.S. EPA's guidance.

U.S. EPA offers the following definition of environmental justice:

> the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people, including racial, ethnic, or economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

"Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analysis" (1998)

California law defines environmental justice as:

> the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

Government Code, section 65040.12.

Staff relies on its CEQA analysis to determine if a project would have significant adverse impacts to human health or the environment. This analysis serves to identify the "high and adverse" impacts that Executive Order 12898 directs federal agencies to address and determine if they fall "disproportionately" on minority or low-income populations. To complete the analysis, staff gathers demographic data to determine if there are minority or low-income populations in the area(s) affected by the project's impacts. This approach is consistent with U.S. EPA's guidance in using environmental review under NEPA to assess a project's impacts to determine their significance and, thus, whether they are "high and adverse."

When the EEC proceeding began, staff engaged in extensive public outreach activities, including holding all project-related workshops in the community and providing ample opportunity for public comment. All notices for the proceeding

were provided in both English and Spanish. The Commission's Public Advisor's Office provided a representative at each public event in order to assist the public in understanding the siting process and participating in the proceeding. The Public Advisor's Office also provided assistance to members of the public and interveners by answering questions, facilitating document distribution, and identifying applicable guidance on the Commission's website. The EEC AFC Committee has also encouraged extensive public involvement, even extending evidentiary hearings to a third day in order to allow more time for interveners and the public to participate.

Staff also conducted a "screening" analysis, as identified in the Guidelines, in order to ascertain whether there is a protected population in the area impacted by the project. Using both a one-mile and a six-mile radius, staff concluded that there is such a population. (Exhibit 200, p. 4.8-2.)

The next step in the staff analysis, which follows the EPA Guidance, was to determine whether the EEC could cause a high and adverse human health or environmental effect in the environmental justice population. (EPA Final Guidance, § 1.1.2.) In this case, staff identified impacts associated with the proximity of the EEC to the Hayward Executive Airport. These impacts arise from the fact that thermal plumes from the power plant would create a hazard to aircraft arriving or departing from that airport. As a result of this hazard, staff concurs with the FAA recommendation that overflight be avoided; this diminution of available airspace in an area of extensive air traffic in turn creates a significant impact and interferes with the utility of the airport. It also creates an inconsistency with several local laws and standards designed to protect against aviation safety hazards and to ensure the continued utility of the airport. Thus, this project would cause significant adverse impacts in the area of traffic and transportation and in land use. Whether the significant aviation hazard disproportionately affects low-income or minority populations is not an issue in staff's perspective, because staff recommends disapproval of the AFC due to the unacceptable and unmitigable risk associated with the hazard. Nevertheless, the staff proceeded to determine whether the traffic and transportation and land use impacts it identified would disproportionately affect an environmental justice population. Because all people in the region are equally affected by insufficient aircraft maneuverability and land use compatibility, regardless of ethnicity or income level, staff concluded that these significant impacts do not disproportionately affect an environmental justice population. (Exh. 200, pp. 7-1, 7-2.)

Staff did not identify significant adverse impacts in any other technical areas. Although both members of the public and interveners dispute staff's conclusions in the areas of air quality and public health, staff believes that the evidence indicates that the project will not cause significant adverse air quality or public health impacts to any member of the public, even sensitive receptors in these technical areas. Since the EEC will not create adverse air quality or public health impacts, there can be no "disproportionately high and adverse" air quality or public health impacts on members of environmental justice populations.

The only other testimony offered regarding environmental justice was provided by the County and by Chabot–Las Positas Community College District and the Chabot-Las Positas Faculty Association (Chabot Interveners). The County's witness, Dr. Witt, directed her testimony to the area of public health, stating that the staff's public health analysis was flawed because it failed to take into account the existing incidence of death and hospitalization from air-pollution-related diseases. (Exh. 532, p. 3.) As demonstrated earlier in this brief, Dr. Witt disregards staff testimony demonstrating that its analysis takes into account people with pre-existing health conditions. Moreover, when discussing the health conditions on which she bases her testimony, she agreed that other factors, including wood smoke and vehicle emissions, contribute to those conditions, and that she would not know how to attribute the relative contribution of the various factors to those conditions in Hayward. (RT 12/17/07, p. 366-367.) This testimony fails to support the County's contention that the emissions from this project will have a high and disproportionate effect on an environmental justice population.

Dr. Sperling, an instructor in anthropology at Chabot Community College, testified for the Chabot Interveners, stating that the staff's public health analysis was flawed because it doesn't take into account public health concerns of minority and low-income communities. (Exh. 601, p. 4.) However, Dr. Sperling is not a public health expert and was unable to answer basic questions about the reference exposure levels on which the staff conclusions are based. (RT 12/17/07, p. 344.) Therefore, her opinions on public health matters do not shed any light on the sufficiency of the staff's public health analysis. In addition, Dr. Sperling quotes extensively from a report that she did not prepare, concluding that there is "significant debate" about the Commission's approach to environmental justice. (Exh. 601, p. 7.) However, as she conceded in the hearings, her testimony does not address compliance with state and federal recommendations relating to environmental justice. (RT 12/17/07, p. 343, lines 12-14.) Within a siting case, it is appropriate to follow the guidance specifically offered by U.S. EPA for

incorporating environmental justice into project-specific environmental review and Dr. Sperling offered nothing to contest that approach. Staff conducted an extremely conservative public health analysis, and concluded that even under worst-case conditions, no public health impacts will result from the operation of this project. This project will not create an environmental justice impact.

IV. Traffic and Transportation

A. Avoiding the Hazard Created by the Project's Thermal Plumes Will Require Measures that Create a Risk that Constitutes a Significant Adverse Impact.

As will be discussed in detail below, the evidence presented at hearings supports a conclusion that the project's thermal plumes would create a hazard. This hazard is the basis of the staff conclusion that the project would be inconsistent with a number of applicable City of Hayward LORS. In addition, although this hazard does not itself constitute a significant adverse direct impact under CEQA, it does lead staff to concur with the Federal Aviation Administration's (FAA's) recommendation that overflight of the facility be avoided. Avoiding overflight would create a diminution in the amount of available airspace in an area of extensive air traffic, creating increased congestion in an already complex airspace, limiting pilot options, and interfering with the utility of the airport. These effects do constitute a significant adverse impact under CEQA, and staff has not found any evidence of feasible mitigation that would lessen these effects to an acceptable level. In addition, due to other restrictions on local airspace, including the conditions of certification included in the decision amending the license for the Russell City Energy Center facility, the project's incremental effect on available airspace and airport utility is cumulatively considerable.

1. The Record Contains Indisputable Evidence that Aircraft Fly in the Vicinity of the Project at Altitudes Below 1000 Feet AGL.

Both the staff and the City of Hayward challenged the applicant's conclusion that airplanes and helicopters in the takeoff and landing phase of flight will not fly near the Eastshore site at traffic pattern altitudes. (Exh. Exhibit 20, Graves, p. 9.) The project site is just outside the Hayward Executive Airport traffic pattern zone and a few hundred feet south of the preferred noise abatement downwind departure for Runway 28L. (Exh. 200, p. 4.10-20.) Staff and the City of Hayward presented "penetration gate plots" showing the relative proximity of aircraft overflights to the project and indicating whether the aircraft were departing or

arriving at the airport. (Exhs. 208, 417, 418.) The data clearly show that aircraft fly directly over the project site, in one instance at an elevation of 300 feet above ground level. Moreover, these flights are overwhelmingly arrivals or departures, which obviously occur when pilots can least afford to be distracted by the turbulence that can be caused by thermal plumes. Because the data only reflect three months worth of flights, it is likely that during the life of the project, there will be hundreds, if not thousands, of instances in which aircraft fly over the project site.

B. The Hazard Associated with Thermal Plumes Has Led the FAA to Recommend Avoiding Overflight.

The FAA -- the federal agency charged with promoting and protecting aviation safety – has recommended that "flight over or around plume generating facilities should be avoided as there is the *potential* (however low) for aircraft upset at close proximity to high velocity plumes" [emphasis in the original]. It also recommends that pilots avoid overflight of thermal plumes at altitudes of less than 1,000 feet above ground level (AGL). (*Safety Risk Analysis of Aircraft Overflight of Industrial Exhaust Plumes*, p. 16, identified as Attachment 1 to Exh. 20.) This recommendation applies to this facility, as it will produce high velocity thermal plumes. The FAA acknowledges that the risk of upset that would be caused by overflight of thermal plumes is low, but not nonexistent. (Exh. 204, p. 2.) Because the evidence is clear that aircraft will fly over or around the project site at altitudes below 1,000 feet, the FAA's recommended restriction should be implemented for this project.

C. Imposition of an Overflight Restriction Will Diminish Available Airspace and Complicate Aircraft Maneuverability, Creating Both a Significant Adverse Direct Impact and an Incremental Effect that is Cumulatively Considerable.

As a result of the overflight restriction that would be created by compliance with the FAA recommendation, the amount of usable airspace would be diminished. There was a significant volume of testimony presented at the hearings that addressed the effect of this diminution. Staff testified that the airspace around the Hayward Executive Airport is currently heavily congested due to the high level of aircraft activity, and that the level of activity is expected to increase. (Exh. 200, p. 4.10-9.) In fact, the number of aircraft based at the airport is already exceeding projections for 2010. (*Id.* at p. 4.10-8.) Constraints imposed on the airspace include restrictions due to the proximity of the airport to Oakland

International Airport, San Francisco International Airport, and Hayward Executive Airport noise abatement procedures. (*Id.* at 4.10-19.) The additional constraint associated with the FAA recommendation will unreasonably complicate aircraft maneuverability. (*Id.* at 4.10-21.) Staff and the FAA are especially concerned about the effect of the restriction on pilots departing from Runway 28L, and conclude that expecting those pilots to see and avoid the facility while in a "nose-up" configuration during such a critical time of flight is unreasonable. (*Ibid.*)

Staff's concern about the avoidance requirement is heightened by the Commission's recent decision to approve the amendment moving the location of the Russell City Energy Center. (01-AFC-7C.) In that decision, the Commission imposed a condition of certification requiring that the applicant take a series of actions related to the thermal plumes of that facility in order to discourage pilots from flying over or in proximity to the facility. The incremental effect of further limiting usable airspace in an already complex airspace that would be caused by compliance with the FAA recommendation for this project is cumulatively considerable, given the other restrictions and limitations that exist due to other airports, noise abatement procedures, and the Russell City Energy Center conditions. The FAA agrees with this conclusion, and noted that "the cumulative effect of both facilities . . . would make the mitigation [to see and avoid the plumes] impractical. . . The mitigation would be unreasonable and in some cases unattainable." (Exh. 204, p. 2.) The FAA also noted that "[t]he potential for constraints to airport operations create [*sic*] a tangible impact on the future use of the Hayward Executive Airport if the facility is approved at this location." (*Ibid.*)

D. The Hazard and Constraints on Airport Utility Caused by the Project's Thermal Plumes Create an Inconsistency with Several Sections of the Hayward Municipal Code and the Alameda County Airport Use Policy Plan.

As a result of the hazard to aviation and constraints on existing and future airport operations that would be caused by the EEC project, there is also an inconsistency with § 10-6 of the City of Hayward Municipal Code, the purpose of which includes preventing airport hazards and impairment of the utility of the airport. In addition, the project is inconsistent with the Alameda County Airport Use Policy Plan, because objectives of the plan include minimizing safety hazards near airports and promoting the safe, efficient use of an airport's airspace. These inconsistencies, as well as inconsistencies with other sections of

the Hayward Municipal Code are discussed in more detail in the section of this brief addressing Land Use issues.

V. Land Use

Issues in the area of land use are the EEC's inconsistency with local LORS, and the project's impact to the current and future utility of the Hayward Executive Airport. All parties are in agreement that no other CEQA land use impacts will occur as a result of the project.

The evidence in the record indicates that the parties have reached three different conclusions about consistency with LORS. First, the applicant asserts that the project is in conformity with all LORS. Second, the staff asserts that the project is consistent with the goals and policies of the General Plan, but is not consistent with portions of the City of Hayward's Zoning Ordinance, including § 10-1.140, and § 10-1.3200 and § 10-1.1600 et seq., as well as the purpose of § 10-6, and the Alameda County Airport Land Use Policy Plan. The staff's conclusion is based solely on the aviation safety hazard associated with the project's thermal plumes. Third, the City agrees with the staff's findings of non-conformity, but also argues that the Commission should find that the project is inconsistent with the goals and policies of the General Plan. This position is based on the specific location of the project within the industrial zone, regardless of whether the EEC's thermal plumes create a hazard.

Finally, the County of Alameda claims that the EEC could interfere with various redevelopment efforts the County is undertaking in nearby redevelopment areas. It is unclear whether the County is arguing that the EEC would create an inconsistency with the redevelopment plans associated with those efforts.

A. The EEC is Consistent With the Express Goals and Policies Articulated in the Hayward General Plan.

Staff evaluated the EEC project to determine whether it is consistent with the goals and policies articulated in the Hayward General Plan. Staff's analysis included a detailed examination of the Land Use Policies and Strategies of the Land Use Element of the General Plan. (Exh. 200, p. 4.5-11.) Staff concluded that the EEC is consistent with these policies. The City of Hayward (City) disagrees, stating that the project conflicts with its policy of promoting a transition of a manufacturing-based economy to an information-based economy in the industrial corridor. (Exh. 401, p. 5.) Staff bases its conclusion on the fact that

although the City has identified that objective as a policy, it has not taken any of the implementation steps identified in the General Plan to achieve this goal. For example, although various designations for uses within the zoning district have been identified, no specific locations for these designations have been adopted. (Exh. 200, p. 4.5.-11.) Moreover, the EEC is consistent with other uses in the vicinity of the project, including uses that involve the storage of more dangerous hazardous materials than the EEC would use. (*Ibid.*) Until the City takes the steps to implement the policy identified in the General Plan, a determination that the EEC is inconsistent with the policy is both premature and arbitrary.

The City also states that the project would erode the appearance of the Business and Technology Corridor due to the visual impacts of the stacks and transmission poles and nonconformance with the Zoning Ordinance. (Exh. 401, p. 6.) Staff notes that the project is located more than one-third mile away from residential areas, is consistent with other uses in the vicinity, and would not create any significant visual impacts. Again, given the actual appearance of the project and the uses that are allowed nearby, the City's determination appears to be arbitrary. Staff encourages the Committee to find that the EEC is consistent with the General Plan Goals and Policies.

B. The EEC's Thermal Plumes Create an Aviation Safety Hazard Which Renders the Project Inconsistent with Various Discretionary Determinations Mandated Pursuant to the Zoning Ordinance contained in Article 1 of Chapter 10 of the City of Hayward's Municipal Code.

1. General Provisions (§ 10-1.100 et seq.)

Chapter 10 of the City of Hayward's Municipal Code contains zoning requirements. There are specific requirements that apply to uses that are not permitted within a specific Zoning District. § 10-1.140 provides that if a proposed use is not specifically identified as a permitted use with a Zoning district, that use is prohibited unless it can be determined that the use is "similar to and not more objectionable or intensive than the uses listed." (§ 10-1.140.) Permitted uses in the Industrial Zone, where this project would be located, include manufacturing, but do not expressly include power plants. On March 13, 2007, the City of Hayward City Council adopted a resolution finding that the EEC was not "consistent with the purpose of the General Plan and Industrial Zoning District." (Exh. 404) The resolution did not address the language contained in § 10-1.140. Notwithstanding the approach taken by the City of Hayward, staff did

perform an analysis of the standard contained in § 10-1.140 and found that it could not be met. Although staff found that a power plant is a use similar to manufacturing, it would be more objectionable than the other uses listed due to hazards associated with the thermal plumes that would be created by the EEC and detrimental effects to the utility of the Hayward Executive Airport. (Exh. 200, p. 4.5-15.) Other permitted uses would create less of a detriment, and the EEC should be found to be inconsistent with this section of the Hayward Municipal Code.

2. Industrial District Requirements (§ 10-1.1600 et seq.)

Permitted uses in the City of Hayward's Industrial District include a series of enumerated uses as well as uses determined to be similar to the enumerated uses, provided the latter are not adjacent to residentially zoned properties and are not specified as an administrative or conditional use. (§ 10-1.1615.) In this case, the EEC would be a similar use to the enumerated use of manufacturing, but would, absent the Commission's exclusive jurisdiction, require a conditional use permit (CUP) due to its use of aqueous ammonia. (Exh. 200, p. 4.5-16.) Staff also addressed the other requirements applicable to development in the Industrial Districts, and recommended a condition of certification to ensure their implementation. (Exh. 200, p. 4.5-16.) As a result, compliance with the requirements in this Section depends on the EEC's conformity with the section governing CUPs.

3. Conditional Use Permit (§ 10-1.3100 et seq.)

Because the project would, absent Commission jurisdiction, require a conditional use permit (CUP), staff also analyzed whether the EEC would be eligible for a CUP under the City's regulations. Specifically, staff examined the criteria found in the City of Hayward's Municipal Code § 10-1.3200 et seq., which establishes the standards and the process applicable to CUPs. § 10-1.3225 identifies the four findings that must be made when a CUP is approved; staff found that all but the fourth -- harmony with applicable city policies and the intent and purpose of the zoning district involved -- could be made. Staff's conclusion again rests on the fact that the EEC plumes are a hazard, that measures required to avoid this hazard would impair the utility of the Hayward Executive Airport, and that the project is therefore incompatible with § 10-6.00, § 10-6.35, and § 10-1.140. (Exh. 200, p. 4.5-18.) Therefore, the project would not be eligible for a CUP at its current location.

C. Airport Approach Zoning Regulations (§ 10-6.00 et seq.)

Article 6 of Chapter 10 of the Hayward Municipal Code contains the Airport Approach Zoning Regulations. The purpose of the regulations is to promote:

> the health, safety and general welfare of the inhabitants of the City of Hayward by preventing the creation or establishment of airport hazards, thereby protecting the lives and property of the users of the Hayward Air Terminal and of the occupants of the land in its vicinity, and [to prevent] destruction or impairment of the utility of the airport and the public investment therein.

Hayward Municipal Code, § 10-6.00

Although only the applicant openly disputed the staff's conclusion that the EEC is not consistent with the Airport Approach Zoning Regulations, there was nonetheless discussion and some confusion between staff and the City of Hayward about the extent of the area subject to these regulations. (Exh. 200, p. 4.5-20.) In the Russell City Amendment proceeding, the City stated that the "Traffic Pattern Zone" as depicted on the current Hayward Executive Airport Master Plan (See Exh. 200, Land Use Figure 5) establishes the jurisdiction of the Airport Approach Zoning Regulations. Staff disputed that contention in both the Russell City Amendment proceeding and in this case, finding that the map specifically referenced in § 10-6.20 properly identifies the areas subject to the restrictions of the regulations; the map clearly identifies the location of the EEC as being within the airport turning zone, which is subject to the restrictions of the regulations. In addition, § 10-6.35 states that "notwithstanding any other provisions of this Article, no use may be made of any land within any . . . airport turning zone. . . in such a manner as to . . . otherwise endanger the landing, takeoff or maneuvering of aircraft." The thermal plumes created by the EEC would do all three, thereby rendering the EEC inconsistent with these regulations. (See Exh. 200, Traffic and Transportation Figure 6.)

D. Airport Land Use Policy Plan

Alameda County adopted its Airport Land Use Policy Plan (ALUPP) in 1986. Its purpose is to promote the orderly expansion of airports and land use decisions by local governments that minimize noise and safety hazards near airports. (Exh. 535, p. 1.) The ALUPP provides guidelines for use in determining whether proposed uses are compatible with current and anticipated airport operations.

(*Id.* at p. 2.) The EEC site is located within the General Referral Area/Hazard Prevention Zone for the Hayward Executive Airport, which is an area in which uses hazardous to air navigation are prohibited. (*Id.* at p. 56.) Because the EEC thermal plumes present a hazard to aircraft and because the restriction recommended by the FAA to avoid overflight at altitudes of less than 1,000 AGL would unreasonably complicate an already congested and complex airspace, the EEC project would not be consistent with the ALUPP. Staff concludes that the project would not minimize safety hazards or constitute a compatible land use and is therefore inconsistent with the ALUPP.

VI. Local System Effects

Staff and the applicant provided testimony on local system effects, in large part agreeing about the scope of local system benefits that the project would create. The only distinction between the staff's testimony and that of the applicant is that the applicant quantified the value of the criteria pollutant emissions that would be reduced if this project were constructed. (Exh. 15, p. 4.) Because there appeared to be confusion on the part of certain participants in the proceeding about the nature of the staff analysis, we offer the following summary of the analytical approach and key findings.

The Hayward area, including San Leandro and Fremont, require electricity for homes, businesses, schools, and community services. This electricity can be generated elsewhere and imported into the project area or it can be generated locally. Currently, it is generated out of the local area and imported. When a power plant is constructed and begins serving local load, it can have several effects on the transmission and distribution system. These are identified on page 5.6-3 of Exhibit 200. Staff's conclusions are that the project would increase system reliability (Exh. 200, p. 5.6-6), and would integrate into the existing system without the need for additional system upgrades (*ibid.*). Staff was unable to identify whether the project would lead to the deferral of any planned transmission facilities (*id.* at p. 5.6-3) or the value of any reduction in capacity procured for local capacity requirements in the San Francisco Bay Area (*id.* at p. 5.6-6.)[5]

[5] Local Capacity Requirements represent the minimum amount of local generation that must be maintained by a load-serving entity, such as PG&E. They are specified by the California Independent System Operator, and required pursuant to order of the California Public Utilities Commission.

At the hearing, the issue of losses generated the most discussion. Therefore, this brief will address this issue in some detail. Losses represent electricity that is "lost" as it flows over transmission lines, primarily due to the heat created by line resistance. In practical terms, this means that more electricity must be generated to serve a specified load when generation is remote than when it is local. In order to assess what these impacts would be for the EEC project, staff examined how the system would operate with and without the project and compared the two results. (Exh. 200, p. 5.6-4.) In order to analyze the level of losses that would occur without the EEC, staff identified other generation facilities whose operation could be affected if EEC were in operation. The results indicate that the losses associated with the transmission of electricity from those facilities to Hayward ranged between 6.5 MW and 19 MW per year. (*Id.* at 5.6-5.) As a result, staff concluded that between 6.5 and 19 *fewer* megawatts would need to be produced by those plants if EEC were constructed than if it were not. The generation of these megawatts costs money (for the fuel burned) and has environmental impacts, such as air and toxic air contaminant emissions and water consumption; these costs and impacts would be avoided if EEC were built.[6] Staff quantified the avoided cost of generation at between $1.2 and $1.7 million per year – these are savings that would accrue to PG&E ratepayers. (*Ibid.*) The environmental benefits associated with avoiding generation at these facilities were not quantified by staff, but, as noted above, the cost of ERCs associated with the increased emissions at the facilities was quantified by the applicant. (Exh. 15, p.4.)

VII. Alternatives

Staff conducted a thorough alternatives analysis, in which it identified the basic objectives of the project, identified a range of alternatives, and analyzed the alternatives to determine they could meet the project objectives while avoiding significant impacts associated with the project. (Exh. 200, p. 6-1 et seq.) The applicant also filed testimony on alternatives. It was fairly similar to staff's testimony, except that the applicant believes that an important project objective is to develop the project at the proposed location and sell power under the contract it has entered into with Pacific Gas and Electric Company. As a result, the applicant concluded that all alternative locations represent a "no-project

[6] Staff did not compare the costs and impacts associated with the generation of electricity by the EEC with the costs and impacts associated with the generation that would occur elsewhere but for the EEC. This analysis focuses solely on the losses due to importation of generation that is necessary absent the operation of the EEC.

alternative" in which the objectives of the project would not be met. (Exh. 16, pp. 2-3.)

Staff disagreed with that conclusion, but did find that even though it defined the project objectives more broadly than the applicant (Exh. 200, p. 6-3), none of the alternatives examined would meet those objectives. (RT, 1/14/08, p. 73, lines 13-15). As a result, staff urges to Committee to find that the project has significant unmitigable adverse impacts and that no alternatives are available that would feasibly attain the project objectives. Once those findings are made, the Commission will be prohibited from licensing the project unless it makes findings of overriding consideration. (Cal. Code Regs., tit. 20, § 1755.)

VIII. Noise

Although there was relatively little focus on the technical area of noise during the hearings for this proceeding, both the applicant and Intervener Paul Haavik expressed concerns about staff's conclusions. Specifically, the applicant testified that staff's position regarding the applicable noise standard imposed by the City of Hayward is incorrect. On the other hand, Intervener Haavik is concerned that staff's interpretation of that standard may not provide enough protection against noise impacts. The applicant also challenged the staff's conclusion about allowable noise levels at the sensitive receptor R1.

The main issue associated with the project's noise impacts concerns a bank building located immediately to the south of the project site. Staff has proposed a condition of certification that would require the applicant to ensure that the operation of the project does not cause exterior noise levels to exceed an hourly average of 60 dBA at the northern wall of the bank. The applicant requests that this be changed to 70 dBA, basing its request on its interpretation of the City of Hayward's Noise Guidelines (Appendix N to the City of Hayward General Plan). However, the applicant ignores the testimony of the bank's Facilities Supervisor that employees frequently spend break and lunch time in an outside patio area of the facility. (Exh. 311.) As the applicant notes, noise levels up to 70 dBA L_{dn} are "normally acceptable" for commercial buildings under Appendix N. (Exh. 18, p.1.) However, given that the noise standards are presented as a range, with 70 dBA L_{dn} as the highest "normally acceptable" level for commercial land uses and that the bank's employees use an exterior patio for breaks and lunch, staff believes it prudent to require a noise level that is lower in the range than the maximally allowable level under Appendix N. Staff encourages the EEC

Committee to adopt staff's proposed condition without the modification requested by the applicant.

Notwithstanding the staff's conservative approach, Intervener Haavik expressed concern that the staff condition is not sufficiently protective and that a sound wall may be required. However, he provided no testimony to support this contention. Staff notes that its proposed condition is a performance standard, and that the applicant will be required to meet the noise limitation specified in the Commission decision. Staff believes that there are many available measures that can be utilized to reduce noise. (Exh. 200, p. 4.6-11.) If the results of the noise survey required pursuant to **NOISE-4** indicate that additional mitigation beyond that already identified is required, the applicant may or may not include a sound wall as one of those measures. In any event, staff is confident that the noise level specified for the bank can be met and that it represents a reasonable exercise of the discretion allowed by the applicable noise guidelines.

Finally, the applicant also takes issue with staff's recommendation regarding requirements applicable to noise levels at monitoring location R1. Staff proposes to limit project-related noise to 46 dBA, resulting in an increase of the ambient of 4 dBA. (Exh. 200, p. 4.6-11.) The applicant requests that project-related noise be allowed at 49 dBA, which it claims would result in an increase of 5 dBA, but which would in reality result in an increase of 6 dBA.[7] Given that R1 is located in a densely populated residential area, staff believes it is appropriate to keep project-related noise impacts to a minimum so that as few people as possible are affected. Therefore, staff recommends that the limit specified in condition of certification **NOISE-4** remain unchanged. This noise limit would result in an increase that would be clearly below the 5 – 10 dBA level of significance.

\\\

\\\

\\\

[7] The applicant's testimony that its recommendation would result in a 5 dBA increase is based on an arbitrary change that the applicant made to the ambient nighttime noise levels identified by staff. (*Compare*, Exh. 200, p. 4.6-6, Table 2 with Exh. 18, p. 2, Answer 5.) In addition, the applicant did not account for the cumulative impact of the EEC project and the Russell City project.

CONCLUSION

The EEC project should not be sited at the location proposed by the applicant. Although the project would not create any environmental justice issues and its impacts are largely mitigated, the significant impacts and LORS inconsistencies created by the project's thermal plumes cannot be mitigated or resolved. Placing a project with thermal plumes so close to low-flying air traffic within the approach zone of the Hayward Executive Airport is unreasonable and should be disallowed. Staff recommends the Committee issue a Presiding Member's Proposed Decision that reflects the evidence in the record demonstrating that the EEC is proposed for an unacceptable location.

Date: February 11, 2008

Respectfully submitted,

CARYN J. HOLMES
Staff Counsel IV
California Energy Commission
1516 9th St.
Sacramento, CA 95814

Ph: (916) 654-4178
Fax: (916) 654-3843
E-mail: cholmes@energy.state.ca.us

ATTACHMENT 1

Revised Condition of Certification Public Health-1

PUBLIC HEALTH-1 The project owner shall, within 270 days of starting commercial operations, provide the results of a source test on the number of engine exhaust stacks required below and a human health risk assessment (HRA) to the Compliance Project Manager (CPM). The source test may be conducted concurrent with that required by Air Quality Condition of Certification AQ-24. The source test and human health risk assessment shall be conducted according to protocols reviewed and commented on by the Bay Area Air Quality Management District and reviewed and approved by the CPM, and shall be submitted to the CPM not less than 60 days after the date of starting commercial operations. The source test and HRA shall include the quantitative analysis and assessment of the following toxic air contaminants: acetaldehyde, acrolein, benzene, 1,3-butadiene, ethyl benzene, formaldehyde, naphthalene and all PAHs (including speciation of all PAHs emitted in the gaseous and particulate phases), propylene, toluene, and xylenes. The project owner may, at the time of submittal of the source test protocol, submit a request for removal of the requirement to test for any toxic air contaminant for which analytical or other problems may render those test results suspect. In considering such a request, the CPM shall consider the best available scientific evidence and the opinions of the staff of the Air Resources Board and the U.S. EPA. The source test results and human health risk assessment shall confirm that the theoretical maximum cancer risk at the point of maximum impact is less than 10 in one million and the acute and chronic Hazard Indices are less than 1.0. If the health risk assessment shows a cancer risk greater than 10 in one million or a Hazard Index greater than 1.0, operation of the power plant shall be restricted to the number of engines that the CPM determines will represent a risk of less than 10 in one million or a Hazard Index of less than 1.0 until the project owner can certify that the risk of operating all engines does not create a theoretical maximum cancer risk greater than 10 in one million or an acute or chronic Hazard Index greater than 1.0 at the point of maximum impact.

The number of engine exhaust stacks to be sampled shall be determined in the following manner:

1. Four (4) engines shall be randomly chosen by the owner for stack testing and approved by the CPM. If stack testing results for each contaminant described above on all four engines falls within two standard deviations of the arithmetic mean of each individual contaminant, no further engines need be tested.

2. If any contaminants measured in the stack test fall outside two standard deviations of the arithmetic mean for that contaminant, an additional four (4) engines, chosen at random by the owner and approved by the CPM, shall be stack tested for all contaminants that fell outside two standard deviations of the arithmetic mean. If stack testing results for each contaminant described above on all eight engines tested fall within two standard deviations of the arithmetic mean of each individual contaminant, no further engines need be tested. The project owner may request relief from further stack testing requirements by providing the CPM a written request with documentation explaining that further testing would not result in a significant change in the health risk assessment results.

3. This process shall be continued until either the results for all engines tested fall within two standard deviations of the arithmetic mean of each individual contaminant for all engines tested or all fourteen (14) engines are tested.

4. The HRA described above shall be based on all data produced for all engines tested under this protocol.

Verification: Not less than sixty (60) days after the start of commercial operations, the project owner shall provide a copy of the source test and human health risk assessment protocols to the BAAQMD for review and comment and to the CPM for review and approval. Included in the test protocol shall be the list of four (4) engines randomly chosen for the initial sampling. Subsequent to the initial testing, any additional engines chosen for testing shall be submitted to the CPM for review and approval. Not less than thirty (30) days after each group of source tests has been completed, the project owner shall provide the source test results to the BAAQMD and the CPM. ~~If the source testing is consistent with~~

~~item #2 above, the owner shall submit the HRA to the BAAQMD for review and comment and to the CPM for review and approval not later than sixty (60) days after the date of the test.~~ If additional tests are required, the project owner shall submit in sequence the next set of randomly chosen engines for testing to the CPM for approval until either all testing conforms to the protocol described above or all 14 engines are tested. When the project owner has fulfilled the requirement for testing as described above, the project owner shall submit all test results and the HRA to the BAAQMD for review and comment and to the CPM for approval pursuant to the dates identified in Air Quality Condition of Certification AQ-24, but in no event ~~within sixty (60) days of the date of the last test or not~~ later than 270 days after the date of starting commercial operations~~, whichever is sooner~~.

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

APPLICATION FOR CERTIFICATION FOR THE EASTSHORE ENERGY CENTER IN CITY OF HAYWARD BY TIERRA ENERGY	**Docket No. 06-AFC-6** **PROOF OF SERVICE** **(Revised 1/18/2008)**

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

Greg Trewitt, Vice President
Tierra Energy
710 S. Pearl Street, Suite A
Denver, CO 80209
greg.trewitt@tierraenergy.com

APPLICANT'S CONSULTANTS

David A. Stein, PE
Vice President
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
dstein@ch2m.com

Jennifer Scholl
Senior Program Manager
CH2M HILL
610 Anacapa Street, Suite B5
Santa Barbara, CA 93101
jscholl@ch2m.com

Harry Rubin, Executive Vice President
RAMCO Generating Two
1769 Orvietto Drive
Roseville, CA 95661
hmrenergy@msn.com

COUNSEL FOR APPLICANT

Jane Luckhardt, Esq.
Downey Brand Law Firm
555 Capitol Mall, 10th Floor
Sacramento, CA 95814
jluckhardt@downeybrand.com

INTERESTED AGENCIES

Larry Tobias
CA Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630
ltobias@caiso.com

INTERVENORS

Greg Jones, City Manager
Maureen Conneely, City Attorney
City of Hayward
777 B Street
Hayward, California 94541
greg.jones@hayward-ca.gov
michael.sweeney@hayward-ca.gov
maureen.conneely@hayward-ca.gov
david.rizk@hayward-ca.gov

Pillsbury Winthrop Shaw Pittman LLP.
Att: Diana Graves, Esq
Att: Michael Hindus, Esq
50 Fremont Street
San Francisco, CA 94120
diana.graves@pillsburylaw.com
michael.hindus@pillsburylaw.com
ronald.vanbuskirk@pillsburylaw.com

Paul N. Haavik
25087 Eden Avenue
Hayward, CA 94545
lindampaulh@msn.com

James Sorensen, Director
Alameda County Development Agency
Att: Chris Bazar & Cindy Horvath
224 West Winton Ave., Rm 110
Hayward CA 94544
james.sorensen@acgov.org
chris.bazar@acgov.org
cindy.horvath@acgov.org

Charlotte Lofft & Susan Sperling
Chabot College Faculty Association
25555 Hesperian Way
Hayward, CA 94545
clofft@chabotcollege.edu
ssperling@chabotcollege.edu

Law Office of Jewell J. Hargleroad
Jewell J. Hargleroad, Esq
1090 B Street, No. 104
Hayward, CA 94541
jewellhargleroad@mac.com

Jay White, Nancy Van Huffel,
Wulf Bieschke, & Suzanne Barba
San Lorenzo Village Homes Assn.
377 Paseo Grande
San Lorenzo, CA 94580
jwhite747@comcast.net
slzvha@aol.com
wulf@vs-comm.com
suzbarba@comcast.net

Richard Winnie, Esq.
Alameda County Counsel
Att: Andrew Massey, Esq.
1221 Oak Street, Rm 463
Oakland, CA 94612
richard.winnie@acgov.org
andrew.massey@acgov.org

*** Libert Cassidy Whitmore**
Att: Laura Schulkind, Esq.
Att: Arlin B. Kachalia, Esq.
153 Townsend Street, Suite 520
San Francisco, CA 94107
lschulkind@lcwlegal.com
akachalia@lcwlegal.com

Robert Sarvey
501 W. Grantline Rd
Tracy, CA, 95376
Sarveybob@aol.com

ENERGY COMMISSION

Jeffrey D. Byron, Presiding Member
jbyron@energy.state.ca.us

John L. Geesman, Associate Member
jgeesman@energy.state.ca.us

Susan Gefter, Hearing Officer
sgefter@energy.state.ca.us

Bill Pfanner, Project Manager
bpfanner@energy.state.ca.us

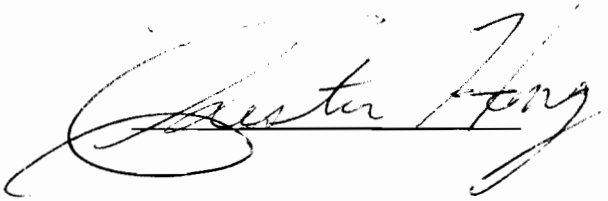
Caryn Holmes, Staff Counsel
cholmes@energy.state.ca.us

Public Adviser
pao@energy.state.ca.us

DECLARATION OF SERVICE

I, **Chester Hong**, declare that on **February 11, 2008**, I deposited copies of the attached **Staff's Opening Brief**, in the United States mail at Sacramento, CA, 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 the 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.