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DOCKET	
07-AFC-6	
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STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

In the Matter of:
CARLSBAD ENERGY CENTER PROJECT) DOCKET NO: 07-AFC-6

Rob Simpson's OPENING BRIEF

1. PROJECT'S ENVIRONMENTAL IMPACTS

a. Are there any unmitigated significant direct, indirect, or cumulative environmental impacts of the Carlsbad Energy Center Project (CECP)?

Yes.

Biological assessment

The Staff Biological assessment of the project is built upon a false premise and reaches incorrect conclusions. It states; The CECP would implement dry-cooling technology, and therefore would not require intake or outflow of ocean or lagoon water for once through-cooling purposes, and would not produce a thermal plume. FSA4.2-16

This statement fails to consider the multitude of thermal plumes that would be created. In response to a city of Carlsbad comment regarding heating and air turbulence staff indicated; As described in Appendix TT-1 of the PSA, heated exhaust would be emitted from the HRSG turbine stacks (139 feet tall) and air coolers (22 feet tall). The exhaust temperature would be approximately 363 degrees Fahrenheit immediately above the HRSG turbine stacks; the heat

would quickly dissipate above the stack opening. Also, plume velocity from the HRSG turbine stacks would be approximately 67 feet per second (f/s) at the stack opening; the plume velocity would quickly decrease to approximately 26 f/s at 300 feet above ground. The elevated heat and the increased velocity of the CECP plume may temporarily disorient birds that intersect the plume during flight, but it is anticipated that the typical response would be evasion and avoidance of the plume. Avian interaction with increased temperature and velocity within the plume is not anticipated to result in avian mortality or significantly alter migration routes or present a barrier to migration. 4.2-31 This response fails to identify; the fire pump engine with a stack height of 30 feet, exhaust temperature of 938 degrees Fahrenheit and velocity of 254 feet per second. PDOC table 3-3, or provide any basis for the "anticipated" avian response to 173 mile per hour toxic plume(s). The facility would have the capability of transitioning from a safe flyover to an invisible inferno in 10 minutes

The plume velocity analysis which demonstrates a hazard for airplanes is not considered in the biological assessment as a hazard to birds.; " The calculated calm wind condition vertical plume-average velocities from the CECP gas turbines/HRSGs and air coolers are predicted to be greater than 4.3 m/s at 500 feet above ground. The worst-case ambient conditions used in the velocity calculations will occur, potentially frequently, during the plant's life when small aircraft could fly above the CECP exhausts. Therefore, the air traffic pattern should be evaluated and appropriate mitigation measures recommended for this potential air safety impact." 4.10-30 In addition to temperatures sufficient to cook birds and velocity sufficient to interfere with flight, endangered bird species would be subject to a toxic cloud much like the proverbial canary in the coal mine. The anecdote demonstrates a long known and relied upon premise that birds are more susceptible to air quality effects than humans.

Impact with a high velocity, high temperature toxic plume, which would reach a height of 300 feet 2 seconds after it is exhausted, is in fact a collision and impact which the FSA failed to consider; "Because the proposed CECP exhaust stacks are significantly shorter than 350 feet (the height above which is considered dangerous to migrating birds), and shorter than the existing built environment (e.g., EPS exhaust stacks), and with implementation of Condition of Certification **VIS-4**, impacts resulting from bird collisions with CECP structures would be less than significant." 4.2-14 This conclusion also appear to rely on the existing

stack as a baseline for protection of wildlife collisions. It would appear that the existing stack would actually tend to reroute birds directly into the path of the deadly invisible plumes. If the existing stack does in fact provide some "built environment" protection for wildlife than this should be considered in the aspect of this project identified as; "the potential shutdown of Encina Units 4 and 5" scheduling order.

The report further indicates in respect to birds; Collisions typically result when the structures are invisible (e.g., bare power lines or guy wires at night), deceptive (e.g., glazing and reflective glare in windows), or confusing (e.g., light refraction or reflection from mist)" 4.2-13 The "invisible" plumes fit this description. if birds are not immediately cooked by the temperature or die from the fumes they may become blinded by the ammonia slip or other toxins and crash. the Facility can also cause the "mist" (identified above as a hazard) in the 4 million gallons per day of vaporized sea water.

The assessment further states; "Collision rates generally increase when birds are startled by a disturbance or are fleeing from danger." The frequent and fast starting facility can cause birds to be startled and increase collisions. This facility's design is not like historical facilities; the intermittent operation with frequent and fast starts, short stacks, high exhaust temperatures and plume speed create a avian impact that has not been studied or mitigated.

This facility is planned in what may be one of the most biologically sensitive locations in the State. "the Agua Hedionda Lagoon is located immediately to the north of the site." 4.3-4. "The 400-acre Agua Hedionda Lagoon is one of the threatened coastal wetlands on the Southern California coastline. Draining 135,000 acres in the heart of the burgeoning metropolitan area of San Diego's north county, the Lagoon watershed is a sensitive and vital ecosystem. It is home to juvenile fish, crabs, hundreds of species of marine life and waterfowl, including an array of threatened and endangered species. It also provides a much needed respite for migrating birds. The Lagoon is unique in that it has many current uses such as a YMCA day camp, recreational boating, a mussel and abalone aquaculture facility, a white-sea bass breeding and research center and a power generating facility. The Lagoon's various usages, and the many activities and ecosystems it supports, makes it a distinctive and precious natural resource unlike any other."

<http://www.aguahedionda.org/Watershed/Watershed.aspx>

In November 2000 the Agua Hedonia Lagoon was designated as a critical habitat for the

[tidewatergoby](#). The California gnatcatcher which are found at the site was listed as Threatened by the [United States Fish and Wildlife Service](#) in 1993

The site is surrounded on at least 180 degrees by sensitive habitats. The Biological assessment fails to consider the effects of the added berms and tree canopy planned; " To address the potential adverse impacts of construction and construction staging at staging sites D and E, staff recommends Condition of Certification **VIS-3** which would include, the following:

- planting of additional landscape screening, including tall tree and shrub plantings, on the northern and western boundaries of staging sites D and E (near fuel oil tanks #1 and #2) at the earliest feasible time, during early stages of project construction; 4.12-10" While this mitigation measure may be necessary for visual resources. It may also create raptor perches which could threaten endangered species or have other unstudied biological effects.

The Biological Assessment states: "Osprey and other large aerial perching birds, including those accorded state and/or federal protection, are susceptible to transmission line electrocution. Because raptors and other large perching birds often perch on tall structures that offer views of potential prey, the design characteristics of transmission towers and poles are a major factor in raptor electrocutions (APLIC 1996). Electrocution occurs when a bird simultaneously contacts two energized phase conductors or an energized conductor and grounded hardware. This happens most frequently when a bird attempts to perch on a transmission tower or pole with insufficient distance between these elements..."The applicant would construct the proposed transmission lines according to APLIC's "raptor-friendly" guidelines. Specifically, the transmission lines would have a minimum of 5.5 feet between conductor wires." 4.2-15 The Endangered California Brown Pelican has a 7 foot wingspan. 5.5 feet between conductors does not adequately mitigate potential significant impacts.

Nitrogen Deposition is known to cause increased growth of non native plants which could threaten endangered plants and animals. See Metcalf Energy Center and CEC pier report

http://www.energy.ca.gov/research/environmental/project_summaries/PS_500-99-013_WEIS

S.PDF. This facility in this location could cause these effects. The applicant has not demonstrated that Nitrogen Deposition will not result in a significant impact.

The Biological Assessment states; "Surveys of the proposed CECP site and vicinity include an aquatic survey of Agua Hedionda Lagoon for San Diego Gas and Electric (SDG&E) in 1994 and 1995, a biological resource survey of the entire Encina Power Station in 2003, and a reconnaissance-level survey conducted by the applicant, which included the CECP site and a one-mile buffer, in August 2007. 4.2-4 These surveys are all outdated and should be updated to represent "existing physical conditions". The Warren Alquist Act contains specific time periods for agency determinations and processing of applications. The parties have not agreed to an extension of these timeliness. These time periods are likely based upon CEQA guidelines for timely environmental review.

In **COMMUNITIES FOR A BETTER ENVIRONMENT**, v. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (CBE v. SCAQMD) the court held that; In determining whether oil refinery's proposed project to produce ultra low sulfur diesel (ULSD) would have significant impacts requiring environmental impact report (EIR), the relevant baseline was the existing physical conditions.

Because the FSA fails to recognize the above significant potential effects it did not disclose these potential effects to US Fish and Wildlife Service, the California Department of Fish and Game or the Coastal Commission. The CEC must seek and receive consultation with these agencies regarding the impacts within their adjacent jurisdiction(s). This project requires a formal biological opinion from the USFWS for concurrence with the Endangered Species Act.

The proposed CECP would not withdraw water from Agua Hedionda Lagoon for project specific uses, and therefore would not result in impingement or entrainment impacts. NMFS, USFWS, and CDFG concur with staff's determination (Chesney 2009; Koski 2009; Paznokas 2009). However, if EPS Units 4 and 5 were to cease operations altogether, and their service and auxillary water pumps were no longer needed, the CECP would require intake water from Agua Hedionda Lagoon. If this were to occur,

coordination with the resource agencies regarding consistency with Clean Water Act Section 316(b) and the federal and state endangered species acts would be required (refer to Condition of Certification **BIO-9** [Future Agency Coordination]).

Units 4 and 5 will shut down at some time. This addition to the facility has the potential to delay that shut down or infer some rights to intake that agencies may be less likely to revoke. If the shutdown of Units 4-5 would cause the shutdown of Units 6-7 than the operator may be less likely to shut down 4-5. The project must be considered as a whole. This is not a new facility or 2 new facilities as the applicant would like to license it. It is an addition to an existing facility. The emissions from 4 and 5 were not considered in this proceeding as background or part of the baseline. The potential of increased operation of 4-5 based upon this modification have not been considered. If it is cheaper to operate or the limited operating scenario's for the new equipment are exceeded this modification will result in increased operation of Units 4-5. "The Supreme Court, [Werdegar](#), J., held that: (1) increased use of existing equipment was to be evaluated as part of project, not as part of the baseline environmental setting;" CBE v SCAQMD

The effects of vaporising some 4 million gallons of sea water per day has not been adequately addressed

Air Quality

The Applicant proposes to permit this modification of the existing facility as if it were 2 new plants to evade Federal PSD Permitting. The Air District and CEC seem content to go along for the ride. The CEC should be processing this license as if Federal Permitting rules applied. The CEC's prior failure to ensure that Federal laws were followed resulted in the Gateway Generating Station's construction and operation in violation of the Clean Air Act. A Clean Air Act Lawsuit is presently pending in the United States v PG&E. The CEC's prior failure to ensure that Federal laws were followed resulted in the remand of the Federal PSD permit for the Russell City Energy Center. The State does not have the authority to ignore Federal Laws in pursuit of corporate interests.

The Emission offsets are not adequately identified to determine if they provide actual mitigation. They do not include the year that they were established, distance from the site or adequate basis for interpollutant trading, particularly in light of the new Federal NO2 Standard.

The FDOC states; "Since the District determined that there was not a representative two-year operating time period for Units 1, 2, and 3 of the Encina Power Station during these five years, the 5-year average of emissions determines baseline emissions for these units." and utilized 2002-2006"

The CEC seemed to understand that "The total generation for the Encina13 and South Bay boilers has steadily been decreasing over time, and showed a marked reduction when the Palomar Energy Center started operation in 2006. This trend should continue into the future with the

potential for marked reductions with the Otay Mesa Power Plant starting operation in October 2009," 4.1-114 and so using baseline conditions of nearly a decade ago when the plant operated was a baseload facility is not representative of actual conditions.

[149Ek589](#) k. Significance in general. [Most Cited Cases](#)

In determining how baseline conditions should be measured to determine whether a project may have significant adverse effects requiring environmental impact report (EIR), a temporary lull or spike in operations that happens to occur at the time environmental review for a new project begins should not depress or elevate the baseline. [14 CCR § 15125\(a\)](#). (CBE v SCAQMD)

[149Ek589](#) k. Significance in general. [Most Cited Cases](#)

In determining how baseline conditions should be measured to determine whether a project may have significant adverse effects requiring environmental impact report (EIR), where environmental conditions are expected to change quickly during the period of environmental review for reasons other than the proposed project, project effects might reasonably be compared to predicted conditions at the expected date of approval, rather than to conditions at the time analysis is begun. [14 CCR § 15125\(a\)](#).

(CBE v SCAQMD)

The Air District testified

MR. MOORE: As far as the FDOC, it has to comply
18 with our rules and regulations on the date that it's
19 approved by the CEC. If something changes or a rule
20 changes in the period between the time we issue our FDOC
21 and the date the CEC acts, we would have to go back and
22 amend the FDOC and have to determine compliance based on
23 the rules at that time. We're not basing it on the rules
24 that were in place three years ago. We base it on the
25 rules that are in place when it becomes final. 119

A rule did change. On April 19,2010 an amendment application to the Air District Determination was docketed on the CEC website. The project appeared to violate the new standard until this proposed amendment changed the numbers. The new Federal Standards can not be designed to simply change numbers to make a project appear to conform.

The inclusion of a NO2 1-hour maximum impact analysis in a fossil fuel powerplant certification process is a precedent setting act and an issue of national public interest and concern. As such the Commission has the obligation to conduct a *full* public notification process and hold evidentiary hearings with the chance for full public participation.

On the precedent setting issue of how a public agency fulfills its duty to ensure the new NO2 1-hour maximum impact is properly analyzed and subsequently ruled on with *full* chance for public participation, the Commission must take the following steps;

1. The Commission must inform all members of the public who have attended previous workshops and hearings on Carlsbad or submitted comments to the Commission during all Carlsbad related Commission actions, that the CEC analysis

of the NO2 1-hour is available on the CEC website, and when and where the evidentiary hearings will be held.

2. The Commission must notice and make available the staff analysis and the modeling runs for the NO2 1-hour maximum impact on the CEC website under the Carlsbad docket.

The Commission has set the appropriate precedent for public access to this vital information by posting the modeling runs for the proposed Oakley Generating Station on the CEC's website. Nothing less is appropriate for Carlsbad.

3. The Commission must hold evidentiary hearings in Carlsbad.

On this precedent setting issue of widespread public interest and concern, the Commission must hold evidentiary hearings on any NO2 1-hour maximum impact staff analysis the Commission may approve in the community in which both the predicted NO2 1-hour maximum impact will occur *and* that will suffer the greatest amount of increased morbidity and mortality from the proposed Carlsbad.

In addition to the above the required actions by the Commission, these already identified defects in the applicants modeling must be corrected ;

1. The Meteorological Data used by the applicant for the mandatory 1-Hour NO2 max impact analysis must be the most current and appropriate data available.

The applicant has attempted to circumvent the law and save itself money by using 2004-2006 data for AERMET preprocessing (for AERMOD modeling) instead of the available and legally required 2006-2009 data.

The Commission must instruct the applicant to use the appropriate 2006-2009 data for AERMET processing.

2. The Ambient Air Quality data used by the applicant to determine the existing O₃ and NO₂ levels must be the most current and appropriate data available.

The applicant has attempted to circumvent the law and to save itself money by using stale 2004-2006 data to model the existing O₃ and NO₂ levels, instead of the available and legally required 2006-2009 data.

The Commission must instruct the applicant to use the appropriate 2006-2009 data to model the existing O₃ and NO₂ levels.

3. The applicant must model for the 1-Hour NO₂ max impact *and* all other regulated pollutants using Meteorological and Ambient Air Quality data that has been adjusted to include the change in humidity and temperature that results from the water vapor that will be emitted during operation by the applicants chosen cooling system.

The applicants current modeling (using stale, illegal data sets) does not model for what the actual meteorological and ambient air quality conditions will exist when the applicants chosen cooling system is emitting vapor into the air will be.

These issues are also important since the applicant appears to intend to exclude itself from compliance with air quality standards during startups. Mr. Walters testified;

I actually completed a study
17 for a hot gas load that came down from northern California
18 and I was able to get SIMS data from four power plants for
19 that event. That study indicated there was no statistic
20 of increase in any of the pollutants that were measured
21 from the SIMS. There was a small statistical the amount
22 of ammonia that was injected because it was a small amount

23 of increase in the uncontrolled NOx or the pre-selected
24 catalytic reduction, pre-controlled NOx levels from the
25 turbine, not a particularly high level of increase from
1 either -- it was the only thing with any statistical
2 amount of increase. 122

Air Traffic Safety

The FSA APPENDIX TT-1: PLUME VELOCITY ANALYSIS concludes;

"The calculated calm wind condition vertical plume-average velocities from the CECP gas turbines/HRSGs and air coolers are predicted to be greater than 4.3 m/s at 500 feet above ground. The worst-case ambient conditions used in the velocity calculations will occur, potentially frequently, during the plant's life when small aircraft could fly above the CECP exhausts. Therefore, the air traffic pattern should be evaluated and appropriate mitigation measures recommended for this potential air safety impact." 4.10-30
Because the recommended evaluation has not been completed it is impossible to assess mitigation. The CEC ignored these type of concerns in the Hayward Russell City License and now if the plant is built the FAA will likely order closure of the Airport. The CEC recognized the limitation in the Hayward Eastshore Energy Center and appropriately denied the license.

A review and study should be made using the Sectional aeronautical Sectional Chart for the Carlsbad Airport (CLD) to study IFR and VFR routing of traffic so as avoid overflight of the power plant. NOTAMS should not be used to mitigate because they reduce usable and navigable airspace and compress air traffic which is a safety hazard. a full study should be conducted for the Instrument Approaches to Carlsbad Airport (CLD). The would include the ILS or LOC 24 , RNAV (GPS) RW24, and VOR-A. The study should include any fly overs of the power plant plume to intercept any of the IFR approaches navigation aides and any vectoring of overflights on a missed approach.

A number of appendices to the AFC were marked as "CONFIDENTIAL" no opinion on the adequacy of these items can be determined at this time.

[Appendix 5.3C_CHRIS CONFIDENTIAL.pdf](#)

[Appendix 5.3E_Area Surveyed CONFIDENTIAL.pdf](#)

[Appendix 5.3F_Resources Assessment CONFIDENTIAL.pdf](#)

[Appendix 5.8A_Paleo Records CONFIDENTIAL.pdf](#)

b. Is the potential shutdown of Encina Units 4 and 5 part of the project and must the impacts of such a shutdown be evaluated as part of the CECP?

yes

c. Has a reasonable range of project alternatives been evaluated?

no

2. PROJECT'S LORS COMPLIANCE

a. Does the project comply with federal, state, and local laws, ordinance, regulation, or standards (LORS), including the Coastal Act and the City's General Plan, zoning, redevelopment, and other regulations

no

b. Is the project "coastal dependent"?

no

c. Is it a utility or public utility as those terms are used in the City's regulations?

no

d. Is a comprehensive update of City Specific Plan 144 required for CECP?

unknown

e. Is a Precise Development Plan in the nature of a Specific Plan or a permit similar to a Conditional Use Permit?

if they require the findings necessary for a conditional use permit and include the same opportunities for public participation then they may be similar.

f. Does the Warren-Alquist Act preempt the City Redevelopment Agency's permitting authority?

no

g. Does the Warren-Alquist Act preempt the City's approval authority over the stormwater pollution prevention plan?

no

h. Does the Warren-Alquist Act give the California Energy Commission the authority to decide whether and where the Rail Trail can be built on the project site?

no

i. Must the Coastal Commission issue a report before the Commission can act on the Project's application?

yes

j. Does the recently adopted City Urgency Ordinance CS-070, prohibiting the processing of permit applications for power plants, have any effect on the Commission's processing or consideration of the CECP Application for Certification (AFC)?

yes

k. What specific City development standards (height limits, setbacks, fire equipment access, etc.) apply to the project and does it comply with those standards?

The airport rules should apply and it would appear that the project would violate them.

l. What deference, if any, should be given to the City's interpretation and application of its LORS (see, e.g., Cal. Code Regs., tit. 20, § 1744)?

The CEC should heed the city's interpretation of their rules

m. What relevance and weight do the Commission's Notice of Intent proceedings in 1989 and 1990 have in this proceeding?

3. GREENHOUSE GASES

a. Describe the findings and conclusions you believe the Commission should make regarding greenhouse gas emissions of the CECP.

All greenhouse gases emitted by the project should construction and operation should be considered as increases.

b. Should the greenhouse gas emissions of LNG be included in the estimation of the CECP's potential GHG emissions?

yes all greenhouse gas emissions should also be life cycle to include mining and transport of fuels. Gas use considerations should consider the environmental degradation of Fracking and other destructive mining methods

4. OTHER ISSUES

a. What is the relevance, if any, of the status of electricity purchasing contracts for CECP's output to the Commission's evaluation of the AFC?

The commission should reinstate some need assessment of projects at least to estimate a actual greenhouse gas effect. The highly subjective nature of utility procurement and demand forecasts should not be relied upon by the CEC. The CEC should conduct its own assessment of these.

5. CONDITIONS OF CERTIFICATION

a. Discuss the changes proposed to the Staff-recommended Conditions of Certification by Staff, the Applicant or any other party.
included in the above

6. OVERRIDES

a. An override of significant environmental impacts, inconsistency with state or local LORS, or both, may be required in order to approve the project.

b. Discuss whether the Commission should adopt overrides and if so, on what grounds, citing specific facts and conclusions justifying an override.

The Commission should not adopt an override. We are clearly overbuilt in capacity.

The project is based upon greed not need. Additional fossil fuel fired electrical generation is not needed. It merely enables the fossil fuel industry to maintain control over energy production. An economy dependent on a commodity that is burned does not retain the value in a community that assets like Solar or wind power could. Our youth die in resource

wars while our children and elders suffer from the pollution associated with burning the resources. A green economy, based around homegrown energy sources can help create a clean and sustainable environment. We can protect our people and planet, stabilize our economy and develop jobs. This future comes with a promise of a redistribution of wealth from the corporate polluters to the affected community's. The CEC should focus on projects that benefit the State of California.

Sincerely

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