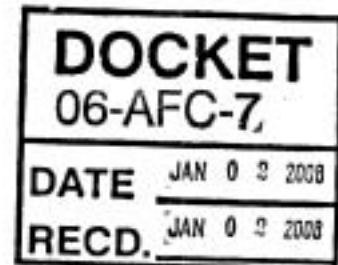


January 2, 2008

Ms. Angela Hockaday
California Energy Commission
Docket Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512



Re: **HUMBOLDT BAY REPOWERING PROJECT
PACIFIC GAS & ELECTRIC COMPANY'S
SUPPLEMENTAL COMMENTS ON THE
PRELIMINARY STAFF ASSESSMENT
DOCKET NO. (06-AFC-7)**

Dear Ms. Rodriguez:

Enclosed for filing with the California Energy Commission are one original and 12 (Twelve) copies of the **PACIFIC GAS & ELECTRIC COMPANY'S SUPPLEMENTAL COMMENTS ON THE PRELIMINARY STAFF ASSESSMENT**, for the Humboldt Bay Repowering Project (06-AFC-7).

Sincerely,


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STATE OF CALIFORNIA

Energy Resources
Conservation and Development Commission

In the Matter of:

Application for Certification for the
Humboldt Bay Repowering Project

DOCKET NO. 06-AFC-7

**PACIFIC GAS & ELECTRIC
COMPANY'S SUPPLEMENTAL
COMMENTS ON THE PRELIMINARY
STAFF ASSESSMENT**

Pacific Gas & Electric Company (PG&E) hereby submits these supplemental comments on the Preliminary Staff Assessment (PSA). These comments supplement our Initial Comments on the PSA filed on December 7, 2007 and also provide an update of some of the issues discussed at the PSA Workshop held on December 14, 2007.

AIR QUALITY

Four air quality issues were discussed at the December 14 workshop. A summary of the discussion and of progress subsequent to the workshop is provided below.

Modeling Methodology/EPA Comment

The issue of EPA's comment on the use of CTDMPLUS relates solely to the PSD increments analysis and compliance of the project with federal LORS.

EPA's comments on the PDOC state, "[The PM10 increments] analysis needs to demonstrate that the appropriate requirements for the use of CTDMPLUS, including the meteorological data input requirements for CTDMPLUS (40 CFR Part 51, Appendix W) have been met." PG&E is providing additional information to the District and EPA regarding compliance of the meteorological data with the Appendix W requirements for

the use of CTDMPLUS, in the form of responses to EPA's comments on the PDOC. We believe that with this additional information, the District and EPA can conclude that use of CTDMPLUS for the increments analysis is consistent with Appendix W requirements. We will continue working with EPA and the District to resolve this issue. Our understanding is that once the issue of the increments analysis is resolved with EPA, the CEC staff's concerns regarding compliance of the project with air quality LORS will be resolved, with the exception of the applicability of the ATCM (discussed separately below).

ATCM Compliance

At the workshop, PG&E presented additional information regarding pre-filing discussions with ARB management regarding the applicability of the Reciprocating IC Engine ATCM to the HBRP project. As discussed at the workshop, the pre-filing correspondence, as well as the first draft of the PDOC prepared by ARB staff, indicated that gas curtailments would be considered emergencies under the ATCM as long as curtailment is properly defined as being beyond the operators' control. We will continue to work with ARB and the District to make sure that curtailments are defined to ARB's satisfaction to ensure compliance with ARB's ATCM regulation. PG&E reiterated its commitment that Diesel fuel would be used only during emergencies, including curtailments, and would not be selected because it was more economical to use Diesel fuel than natural gas.

BACT/EPA Comment

EPA Region 9 requested that the PDOC provide additional information regarding two aspects of the BACT analysis: aftercooling technology for NOx control and Diesel particulate filters for DPM control. PG&E is providing a written response to the District and EPA regarding these issues. The response will indicate that aftercooling technology is feasible for NOx control on the 18V50DF engines to be used at Humboldt, and will be utilized. The response also clarifies the District's oral response at the workshop that it has concluded that DPF technology is not technologically feasible for engines of the size of the 18V50DFs, and since the control technology is not considered technologically feasible, no cost effectiveness analysis is required.

Offsets

The CEC Staff believes that the natural gas supply failures in late 2006 do not constitute normal operation and thus the use of oil fuel in the HBPP boilers should not be included in the emissions baseline used for calculating offsets for the HBRP. The District believes that the period of oil burning in the boilers is appropriately included in the emissions baseline and has calculated the project's offset obligation using the September 29, 2004, through September 28, 2006, baseline period that includes oil firing.

PG&E understands that the CEC staff does not believe that the period that included oil firing in the boilers is an appropriate baseline under CEQA. Therefore, we have provided a calculation for CEQA purposes that excludes emergency oil firing. Rather than using the same 24-month period and excluding oil firing in the boilers (which would have required us to make some assumptions regarding the gas use and emissions that would have occurred if oil had not been burned), we propose to use the original 2004-2005 baseline period for the CEQA analysis. That period does not include any periods that might be interpreted as “emergency” operations. A revised mitigation calculation based on the 2004-2005 baseline is included as Attachment AQ-1. This calculation demonstrates that the shutdown of the existing HBPP units and the ERCs purchased from Eel River Sawmills provide adequate mitigation for emissions from the new HBRP generating units.

BIOLOGICAL RESOURCES

Page 4.2-22, Condition BIO-3 – In the Initial Comments on the PSA, PG&E suggested modifications to this condition of certification relating to the reference and contact information required for the Designated Biologist. At the PSA Workshop Staff clarified that the references could be obtained from persons with whom the Designated Biologist works even if within the same company. With that clarification, PG&E no longer requests the modifications.

Page 4.2-24, proposed Condition of Certification BIO-5, Verification section - PG&E previously requested modifications to the Verification section language for clarification which was accepted by Staff with additional language to clarify that the term “original materials” referred to the WEAP and supporting written materials originally submitted to comply with the condition.

Page 4.2-27, Condition of Certification BIO-10, Items 2 and 7 – In the Initial Comments on the PSA PG&E requested modifications to these items contained in the condition. Staff accepted PG&E’s modifications to Item 2 and indicated that Item 7 which pertains to lighting, use language that was consistent with the conditions of certification contained in Visual Resources

Page 4.2.-28, Condition of Certification BIO-11, Item 6 - PG&E requested clarification in its Initial Comments regarding whether “injured animals” refers to special-status species only or any animal that gets injured. Staff agreed to modify the condition to apply the term “special status” before the term “injured animals” to clarify the requirement.

Page 4.2-29, proposed Condition of Certification BIO-12, Item 3 - PG&E requested modifications in its Initial Comments on the PSA that Staff accepted concerning use of

the term “deed restriction” but asked that the condition ensure that such restriction would be in perpetuity. PG&E offers the following modification:

BIO-12 To mitigate for temporary and permanent impacts to USACE-jurisdictional drainages, USACE-jurisdictional seasonal wetlands, USACE-jurisdictional marshland, and Coastal Commission wetlands, the project owner shall establish a minimum of 4.04 acres of wetland creation, restoration, and enhancement to ensure compliance with all USACE and Coastal Commission requirements. ...

...At a minimum, the wetland mitigation plan shall include:

1. Maps of wetland impact and mitigation areas;
2. Acreages of wetlands to be impacted and acreages of wetland mitigation areas;
3. Terms and conditions of **a deed restriction (in perpetuity)** ~~conservation easements~~ for wetland mitigation areas;

CULTURAL RESOURCES

NRC Jurisdiction

At the workshop, CEC Staff requested additional information from PG&E regarding the jurisdiction of the Nuclear Regulatory Commission (NRC) over the entirety of the Humboldt Bay Power Plant property, including Units 1 and 2 in addition to Unit 3, and a map showing the area that is included in the NRC license. Staff also requested additional information regarding the NRC’s license termination process and consultation with the State Historic Preservation Office (SHPO) regarding decommissioning and demolition of Units 1, 2, and 3.

The Nuclear Regulatory Commission license (Demonstration Power Reactor [DPR] License Number 7) for Humboldt Bay Power Plant Unit 3 includes the entire 143-acre property controlled by PG&E at the Humboldt Bay site. Although PG&E obtained the license as a license to operate Unit 3, the nuclear unit (amended in 1985 to a “possession-only” status) the licensed area includes Units 1, 2, and 3 and all of their ancillary properties, such as the intake and discharge canal, switchyard, storage tanks, and outbuildings. The extent of the licensed area is documented in the Historical Site Assessment (HSA), prepared in September 2006 and included in the AFC as Appendix 8.15A. Within this licensed area is a 13-acre area that includes and surrounds Unit 3, within which the owner applies strictly controlled personnel access and other safety measures.

The HSA is a study that the NRC requires to assess the levels of known or potential contamination within the license area. It evaluates portions of the licensed area as Class I, II or III. These areas are mapped in the HSA’s Appendix B and are defined as follows:

- Class 1 Area: Areas having a potential for radioactive contamination (based on site operating history) or known contamination (based on previous radiological surveys) above the anticipated derived concentration guideline level (DCGL)¹.
- Class 2 Area: Areas having a potential for radioactive contamination or known contamination, but are not expected to exceed the anticipated DCGL.
- Class 3 Area: Areas not expected to contain any residual radioactivity, or are expected to contain levels of residual radioactivity at a small fraction of the anticipated DCGL, based on site operating history and previous radiological surveys.

The map in HAS Appendix B indicates that Unit 3 is a Class 1 Area. Portions of the intake and discharge canals, and also piping systems extending around the outer boundaries of Units 1 and 2, are Class 1 Areas. The buildings and land area surrounding Units 1 and 2 are Class 2 areas, and much of the remainder of the PG&E property is designated as Class 3 area.

The termination of NRC License DPR-7 is a federal undertaking under the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). The plan for the termination of NRC License DPR-7 requires that demolition begin with Units 1 and 2, because there is some cross-contamination between Unit 3 and Units 1 and 2. Demolition of Unit 3 will follow. Because of the contamination of Units 1 and 2 by Unit 3 activities and because all Units 1 and 2 buildings and land are Class 2 areas, and also because the licensed area includes the entire PG&E property, the license termination undertaking includes the demolition of Units 1 and 2, as well as Unit 3.

This federal undertaking will require an analysis under NEPA of the potential environmental effects of decommissioning and demolishing Units 1, 2, and 3 and compliance with the Advisory Council on Historic Preservation's regulations at 36 CFR Part 800 for identifying historic properties and assessing the effects of a federal undertaking on them. It will be the responsibility of the NRC, as lead federal agency, to evaluate Units 1, 2, and 3 and take into consideration adverse effects on them, through consultation with the California Office of Historic Preservation (OHP).

This process will be similar to the process followed for the NRC licensing of the Independent Spent Fuel Installation (ISFSI). For this program, PG&E prepared an Environmental Report, including a historic properties assessment of Unit 3.

Condition of Certification

At the Workshop, Staff requested that PG&E provide suggested condition language to address PG&E's proposal to provide available photographs and other historical documents regarding the Humboldt Bay Power Plant to the Humboldt State University

¹ A derived, radionuclide-specific activity concentration within a *survey unit* corresponding to the *release criterion*. DCGLs are derived from activity/dose relationships through various exposure *pathway* scenarios.

Library or other suitable repository. Ms. Joan Berman, Special Collections Librarian of the Humboldt Room, Humboldt State University, indicated in a conversation on December 19, 2007, that the University would welcome original historical documents pertaining to the Humboldt Bay Power Plant as a contribution to the existing collections held at the Humboldt Room. In particular, photographs and documents that relate to the acquisition of the power plant property and documents that relate to the relationship between the power plant and the Humboldt County government would be useful acquisitions.

The following is suggested language for a Condition of Certification that would require PG&E to develop a program for donation of historical documents to a qualified archival facility in recognition of the Humboldt Bay Power Plant's role in the region's history.

CUL-X Prior to the beginning of demolition of any of the major elements of the Humboldt Bay Power Plant Units 1 or 2, the project owner shall develop a plan for the collection of historical documents and photographs pertaining to the siting and construction of the Humboldt Bay Power Plant and for the preservation of these documents, in perpetuity, within an archival records depository that is qualified to maintain and preserve the documents and to make them available to scholars and the general public for the purposes of historical research. This Historical Documents Preservation Plan will include the following:

1. A list the specific documents or groups of documents that may be available for preservation and a brief description types of document, their source, condition, and potential value to historians and the general public; and their potential availability for preservation.
2. A discussion of criteria to be used for selecting an appropriate receiving repository.
3. A timetable for the donation of the documents to the qualified receiving repository.

Verification: At least 60 days prior to initial startup, the project owner shall provide the draft Historic Documents Preservation Plan to the CPM for review and approval.

FACILITY DESIGN

Staff acknowledged at the PSA Workshop that it has accepted PG&E's modifications to Condition of Certification **GEN-1** as presented in the Initial Comments on the PSA.

GEOLOGY AND PALEONTOLOGY

Staff acknowledged at the PSA Workshop that it has accepted PG&E’s modifications to Condition of Certification **PAL-4** as presented in the Initial Comments on the PSA.

HAZARDOUS MATERIALS MANAGEMENT

Page 4.4-18, Condition of Certification HAZ-1 - PG&E requested the condition be modified to require reporting of only those hazardous materials that are stored in quantities or volumes at or above the existing legal reporting thresholds, which was rejected by Staff. However, Staff did agree to remove the following materials from the required reportable list contained in the condition.

Biocide (Diethylene glycol monomethyle ether, and others)	12 gallons
Citric Acid	50 lbs
Mercury Vapor Lamps and Fluorescent Tubes	100 lbs
Sulfuric Acid (Sealed batteries)	50 gallons

Page 4.4-20, Condition of Certification HAZ-8 – PG&E requested modifications to this condition in its Initial Comments on the PSA. Staff agreed to the modification of Item 10 of the condition.

NOISE

Staff acknowledged at the PSA Workshop that it has accepted PG&E’s modifications to Condition of Certification **NOISE-4** as presented in the Initial Comments on the PSA.

PUBLIC HEALTH

Modeling Methodology

PG&E has provided a great deal of documentation regarding why CTDMPLUS is the appropriate model for use in evaluating project impacts in complex terrain. The use of CTDMPLUS was discussed with and accepted by the District and ARB for the evaluation of ambient air quality impacts in complex terrain, and we continue to believe that CTDMPLUS is the most appropriate model for the evaluation of public health impacts in complex terrain. We presented additional information at the workshop regarding the treatment by AERMOD and CTDMPLUS of plume interaction with terrain to demonstrate that the physical treatment of the plume in CTDMPLUS is more realistic than the treatment of the plume in AERMOD.

Health Risk Assessment

The Staff's analysis of cancer risk from the proposed project predicts a risk of up to 29 in one million, based on 1000 hours per year of Diesel fuel operation for the Wärtsilä engines and using the AERMOD model. As discussed at the workshop, the assumptions used in this analysis are highly conservative, and actual cancer risk is expected to be much lower. The factors that contribute to the conservative nature of the analysis are as follows:

- The Wärtsilä engines will be equipped with oxidation catalysts, which are expected to reduce both particulate and VOC exhaust emissions while the engines are operated in Diesel mode. However, no credit has been taken in the HRA for either (1) the expected direct reduction in the **quantity** of Diesel particulate matter (DPM); or (2) the expected reduction in the overall **toxicity** of the DPM that will result from the control of VOC emissions provided by the oxidation catalysts.
- It is highly unlikely that the Wärtsilä engines will be required to operate in Diesel mode for 1000 hours per year every year for 70 years; however, that is the assumption upon which the DPM cancer risk analysis is based.

PG&E continues to believe that the screening health risk assessment for the project should be based on 50 hours of operation in Diesel mode for testing and maintenance operations, in accordance with ARB and OEHHA guidance. However, we understand that the Staff believes it has an obligation under CEQA to perform the screening health risk assessment based on reasonably foreseeable operations, and the Staff considers 1000 hours of operation in Diesel mode, which includes operation during natural gas curtailments, to be reasonably foreseeable. Therefore, discussions at the workshop focused on several approaches to addressing the assumptions that are driving the cancer risk assessment:

- Identifying a feasible alternative to reduce, rather than completely eliminate, the use of Diesel fuel in the Wärtsilä engines during natural gas curtailments; and
- Identifying a lower expected DPM emission rate for the engines, taking into account the reductions expected from the oxidation catalysts.

Potential alternatives to Diesel fuel include LNG, CNG, and biodiesel. PG&E is consulting with Wärtsilä regarding the use of propane in the engines; additional information will be provided when it is available.

Based on a limited preliminary literature search, PG&E expects that the oxidation catalysts will reduce emissions of DPM by 25 to 30% below the 0.11 g/bhp-hr level

guaranteed by the manufacturer.² PG&E will develop a proposed condition of certification for public health that would reflect some degree of reduction by the oxidation catalysts, to be verified by the initial compliance tests. The condition would include some backstop measure if the oxidation catalysts were not as effective as expected.

PG&E is researching both of these approaches and will be prepared to discuss it further at the next workshop.

SOIL AND WATER RESOURCES

Staff acknowledged at the PSA Workshop that it has accepted PG&E's modifications to Condition of Certification **SOIL & WATER-6** as presented in the Initial Comments on the PSA.

WORKER HEALTH AND SAFETY

PG&E suggested modifications to **WORKER SAFETY -1 AND -2** to ensure that PG&E could proceed if outside agencies do not provide written comments with a reasonable time. Staff agreed with the concept but wanted to work on its own language to accomplish the objective for inclusion in the FSA.

Dated: January 2, 2008



David L. Wiseman
Counsel to PG&E

² "DPM" refers to the filterable, or front-half, particulate matter emitted from a reciprocating internal combustion engine. Applicable federal regulations limit these emissions to 0.11 g/bhp-hr, and Wärtsilä has guaranteed that the engines will meet this limit, which is equivalent to 5.56 lb/hr at full load. The manufacturer-guaranteed emission rate for total particulate matter from the engines is 10.8 lb/hr.

Table 8.1G-3R
HBRP
Calculation of Emission Reductions for CEQA
Revised 12/07

	Annual Emissions, tons
NOx	
Project Emissions	174.3
Onsite Reductions (Note 1)	892.8
Offsite NOx ERCs (Note 2)	5.4
Surplus NOx Reductions	723.9
NOx Reductions for ROC	-163.1
Net Surplus NOx Reductions	560.8
NOx Reductions for SOx	-0.6
Net Surplus NOx Reductions	561.4
NOx Reductions for PM10	301.9
Net Surplus NOx Reductions	258.9
ROC	
Project Emissions	188.9
Onsite Reductions (Note 1)	23.4
Offsite ROC ERCs (Note 2)	2.4
ROC Deficit	-163.1
NOx for ROC at 1:1 (Note 3)	163.1
Net ROC Deficit	0.0
SOx	
Project Emissions	4.4
Onsite Reductions (Note 1)	3.8
SOx Deficit	-0.6
NOx for SOx at 1:1	0.6
Net Surplus SOx Reductions	0.0
PM10	
Project Emissions	118.7
Onsite Reductions (Note 1)	24.9
Offsite PM10 ERCs (Note 2)	9.5
PM10 Deficit	-84.3
NOx for PM10 at 3.58:1 (Note 4)	84.3
Net PM10 Deficit	0.0

Notes:

1. Onsite reductions from shutdown of Humboldt Bay Power Plant.
2. Offsite ERCs purchased from Eel River Sawmills March 26, 2007.
3. See offset ratio calculations in Attachment 8.1G-1.
4. Revised NOx for PM10 ratio provided by ARB March 22, 2007.

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

APPLICATION FOR CERTIFICATION FOR THE
HUMBOLDT BAY REPOWERING PROJECT
BY PACIFIC GAS AND ELECTRIC COMPANY

Docket No. 06-AFC-7
PROOF OF SERVICE
(Revised 10/25/07)

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-07
1516 Ninth Street, MS-4
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Declaration of Service

I, Marguerite Cosens, declare that on January 2, 2008, I deposited the required copies of the attached **HUMBOLDT BAY REPOWERING PROJECT RESPONSE TO STAFF'S STATUS REPORT NUMBER 4** 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. I declare under penalty of perjury that the foregoing is true and correct.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

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



Marguerite Cosens