

Memorandum

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To : William Keese, Chairman and Presiding Member
Michal Moore, Associate Member

From : **California Energy Commission** - Paul Richins, Jr.
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Subject : **ISSUE IDENTIFICATION REPORT—MOSS LANDING POWER PLANT PROJECT**

Attached is our Issue Identification Report for the Moss Landing Power Plant Project (99-AFC-4). This report serves as a preliminary scoping document identifying issues that we believe to be potentially significant. We will present the issues report at the Committee's scheduled Informational Hearing on September 7, 1999.

Attachment

cc: Proof of Service (99-AFC-4)
Ray Menebroker, ARB
Michael Tollstrup, ARB
Mike Sewell, Monterey Bay Unified Air Pollution Control District
Matt Haber, U.S. EPA, Reg. IX
Ed Wylie, U.S. Army Corps of Engineers
Diane Noda, U.S Fish and Wildlife Service
Kate McKenna, Monterey County
Michael Thomas, Central Coast Regional Water Quality Control Board
Mark Seedall, Duke Energy
Wayne Hoffman, Duke Energy
John Torrey, Duke Energy
Lilli Ferguson, California Coastal Commission
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Issue Identification Report

Moss Landing Power Plant Project
(99-AFC-4)

August 1999

CALIFORNIA ENERGY COMMISSION

Energy Facilities Siting and Environmental Protection Division

Paul Richins, Jr., Project Manager

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ISSUE IDENTIFICATION REPORT

Moss Landing Power Plant Project (99-AFC-4)

This report has been prepared by the California Energy Commission staff to inform the Committee, the public and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of our site visits, discussions with federal, state and local agencies, input from the public and our review of the Moss Landing Power Plant Project (MLPPP) Application for Certification (AFC), Docket Number 99-AFC-4. The Issue Identification Report contains a project description, a summary of potential environmental and transmission system engineering issues and a discussion of a proposed project schedule.

PROJECT DESCRIPTION

On May 7, 1999, Duke Energy Moss Landing LLC filed an Application for Certification (AFC) seeking approval from the California Energy Commission (Energy Commission) to construct and operate the proposed 1206-megawatt (MW) Moss Landing Power Plant Project. The project is proposed to be located at the existing Moss Landing Power Plant site that has been operated by PG&E for about 50 years. This site is located at the intersection of Highway 1 and Dolan Road, east of the community of Moss Landing near the Moss Landing Harbor.

The project, as proposed by Duke Energy, consists of replacing the existing electric power generation Units 1-5 (a total of 613 MWs built in the 1950s and shut down in 1995) with two 530 MW, natural gas-fired, combined cycle, units. Each combined cycle unit consists of two natural gas fired combustion turbine generators (CTGs), two unfired heat recovery steam generators (HRSGs) and a reheat, condensing steam turbine generator (STG). Each combined cycle unit will use seawater for once through cooling. Duke Energy also proposes to upgrade each of the existing Units 6 and 7 by 73 MW. These changes total 1206 MWs (530 + 530 + 73 + 73 MWs). In addition, they plan to dismantle eight of the existing 225-foot stacks and remove ten large oil storage tanks that were previously used for Units 1-5.

Duke Energy estimates the capital cost of the project at approximately \$475 million. The project will contribute to the local economy by employing about 650 workers during peak construction (there will be an average of 210 workers over the 29-month construction period) and about 10 permanent jobs during plant operations. Construction is planned to start by the end of 2000, and full-scale commercial operation by early 2003.

POTENTIAL ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties and agencies (such as the California Coastal Commission¹) have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based on our judgment of whether any of the following circumstances will occur:

- significant impacts may result from the project which may be difficult to mitigate;
- the project as proposed may not comply with applicable laws, ordinances regulations or standards (LORS);
- conflicts arise between the parties about the appropriate findings or conditions of certification for the Energy Commission decision that could result in a delay in the schedule.

The following table lists all the subject areas evaluated and notes those areas where significant issues have been identified. Even though an area is identified as having no potential issues, it does not mean that no issue will arise related to the subject area. For example, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops or even subsequent hearings. However, we do not believe such issues will have an impact on the case schedule.

The following discussion summarizes each potential issue, identifies the parties needed to resolve the issue and suggests a process for achieving resolution. At this time, we do not see any of these potential issues as unresolvable. We plan to use this report to focus our analysis on issues that will be included in the Preliminary Staff Assessment (PSA) and Final Staff Assessment (FSA).

¹ The California Coastal Commission is required to provide the Energy Commission with a report on all coastal power projects. We are required to incorporate their report into our analysis. See discussion of their statutory involvement in the process under Procedural Issues.

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

AIR QUALITY

The five critical air quality issues that may affect the timing and possible outcome of the licensing process include: 1) the provision of offsets consistent with Energy Commission licensing requirements; 2) the Best Available Control Technology (BACT) for the project; 3) partial load operation; 4) the modifications to existing Moss Landing Units 6 and 7; and 5) cumulative impacts.

OFFSETS

The availability of offsets and the process by which an applicant secures the offsets for their project are always uncertain during siting cases. In this case, it appears that the inventory of banked emission reduction credits (ERCs) within the District is more than adequate to provide the quantities of offsets needed by the proposed project. The AFC contains a complete listing of the banked credits within the District. Additionally, a confidential filing by the applicant indicates which certificate holders they are negotiating with, and the status of the negotiations. Staff believes that it is likely that the applicant will secure offsets for the project from certificate holders in a timely manner.

Issues such as whether those offsets are Reasonably Available Control Technology (RACT) adjusted or surplus, or whether the U. S. Environmental Protection Agency (EPA) will have concerns regarding the validity of those ERCs, will need to be addressed. Also, the applicant is proposing to use interpollutant offsets of sulfur oxides (SOx) for particulate matter (PM10). The appropriate interpollutant offset ratios will need to be analyzed and agreed to by the oversight agencies (Monterey Bay Unified Air Pollution Control District, California Air Resources Board (CARB), and the EPA).

BEST AVAILABLE CONTROL TECHNOLOGIES

CARBON MONOXIDE

The District and the applicant are discussing what the Best Available Control Technology (BACT) level should be for carbon monoxide (CO) emissions from combustion turbine combined cycle power plants. The CARB Power Plant Siting Guidance Document suggests that oxidizing catalysts and a CO emission level of 6 parts per million (ppm) represent BACT. The applicant believes that oxidizing catalysts increase particulate matter emissions, and is proposing a control level of 9 ppm CO without a catalyst.

The District has asked for additional information from the applicant and for clarifying guidance from the CARB staff in order to resolve this issue in a timely manner. Staff does not believe that the CO emissions/BACT level will be critical to the environmental review of the project at either 6 or 9 ppm. CO emissions will not be offset, so the final BACT level will not affect the offset package directly. Lack of timely resolution of the issue could, however, delay the District's issuance of the preliminary Determination of Compliance.

REACTIVE ORGANIC COMPOUNDS

The proposed reactive organic compound (ROC) emission level is 3.5 ppm. The CARB Power Plant Siting Guidance Document recommends 2 ppm. The District has asked for additional information from the applicant and for clarifying guidance from the CARB staff in order to resolve this issue in a timely manner. Staff believes that the parties will be able to reach a resolution. ROC emissions will be offset, therefore, the final ROC emission level could affect the final offset package.

PARTIAL LOAD OPERATION

With the use of large utility-scale combustion turbines, concerns are being raised about the control of air pollutant emissions during low-load operation, load transitions, start-ups and shutdowns, and commissioning periods. While the Moss Landing project appears to be designed for base-load operation with a minimum number of start-ups and shutdowns, the exact operation of the project in a competitive market is uncertain. Staff, the District, and the applicant will be working to address the topics of offsets, BACT, partial load operation, modifications of Moss Landing Units 6 and 7, and cumulative impacts.

MODIFICATIONS OF MOSS LANDING UNITS 6 AND 7

The emission factors for Moss Landing Units 6 and 7 after the proposed modifications and upgrades are completed need to be better defined. The District has asked for additional information from the applicant to address the uncertainty regarding the emission factors and calculations. Additionally, it appears the incremental increase in output and capacity factor may trigger a CO BACT analysis for Units 6 and 7. Staff believes that the proposed CO emission levels from Units 6 and 7 will not cause a significant air quality impact. CO emissions will not be offset, so a BACT analysis and the final BACT level will not affect the offset package for the facility.

CUMULATIVE IMPACTS

The cumulative impact analysis that staff usually performs includes sources that are either under construction or undergoing District permit evaluation. In this case, modifications of existing Moss Landing Units 6 and 7 are being reviewed by the District and the Energy Commission. The proposed modifications will increase the output of Units 6 and 7 by 146 MW, and potentially increase the capacity factor of those units. Simultaneously, the applicant is installing SCR on Units 6 and 7 to comply with the requirements of District Rule 431, which will significantly decrease the nitrogen oxide (NOx) emission rates from those units. Staff will evaluate any potential cumulative impacts from the increased output and capacity factor of Moss Landing Units 6 and 7 and the four proposed combustion turbine combined cycles.

BIOLOGICAL RESOURCES

IMPACTS TO WETLANDS

Potential wetland issues exist for the proposed project because of the California Department of Fish and Game (CDFG) policy of “no net loss of wetlands”. Small wetland areas on and near the project site have been identified in the AFC. Whether CDFG will want the loss of these areas fully mitigated is uncertain. This issue should be resolvable, but if an impasse occurs between the applicant and the CDFG, the CEC’s certification process could be delayed.

To date, the U.S. Army Corps of Engineers (USACE) has not asserted federal jurisdiction over these small wetlands.

IMPACTS TO "ESSENTIAL FISH HABITAT"

Under the 1996 amendments to the Magnuson-Stevens Act, consultation with the National Marine Fisheries Service (NMFS) is required if a project is funded, permitted, or authorized by a federal agency and the project may adversely affect "Essential Fish Habitat". Pursuant to Section 10 of the Rivers and Harbors Act, the USACE has already issued a "Letter of Permission" for the proposed modifications to the Unit 1-5 intake structure. The USACE has not initiated consultation with the NMFS with respect to the MLPPP. However, this may not be required for "de minimus" actions if the proposed modification of the intake structure can be characterized as such. If consultation is required, but delayed, the Energy Commission certification process could also be subsequently delayed.

IMPACTS TO SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT OR FULLY PROTECTED SPECIES

The southern sea otter (*Enhydra lutris nereis*), a marine mammal which inhabits Moss Landing Harbor and Monterey Bay, is federally listed as threatened and is a fully protected species under state statute. It is likely that an endangered species consultation will be necessary under the federal Endangered Species Act. If the USACE asserts jurisdiction over the entire project, they must consult with the U.S. Fish and Wildlife Service under Section 7 of the federal Endangered Species Act. Otherwise, the applicant would consult under Section 10(a)(1)(B) of the federal act. If not resolved soon, there could be delays in the certification process, to allow the applicant time to address the federal requirements. With respect to the state statute, the CDFG can not allow a take of a "fully protected" species. However, our preliminary analysis indicates that a direct take is not likely to occur as a result of the project. If this is found to be true, then a take of this "fully protected" species would not be an issue.

COMPLETION OF 316 (A) & (B) STUDIES REQUIRED BY THE CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

Rather than requiring the applicant to independently develop new baseline information on the marine environment in the vicinity of the project, Energy Commission staff will be relying on the results of 316 (a) & (b) studies to provide current biological resource data. The timing of the completion of final 316 (a) & (b) reports could be such that our Preliminary Staff Assessment may be delayed. If the applicant provides reliable preliminary data before completion of the final 316 (a) & (b) reports, it might be possible to avoid delay.

WATER RESOURCES

Water Resource issues being evaluated by staff include the Clean Water Act Section 316(a) & (b) studies mentioned under Biology above. The 316(a) information currently being collected, which focuses on thermal impacts from the use of the once-through cooling system, will be used by staff to evaluate the thermal characteristics of the wastewater discharge, compliance with the State Thermal Plan and potential biological impacts from elevated temperatures. The 316(b) information being collected, which addresses potential entrainment and impingement impacts, will focus on the "best technology available" evaluation. In addition to collecting and analyzing this information for potential impact and mitigation measure identification, the 316(a) & (b) information is being collected as part of the Central Coast Regional Water Quality Control Board evaluation for a new National Pollutant Discharge Elimination System (NPDES) Permit for the project. Staff will coordinate with the Regional Board staff and other agency staff to ensure timely and consistent evaluation of the project.

Other Water Resource issues being addressed include compliance with water quality criteria, stormwater runoff discharge and the use of groundwater for certain project needs.

PROCEDURAL ISSUES

We have begun our analysis of the potential issues identified above, as well as our assessment of other environmental and engineering aspects of the applicant's proposal. One of the first steps in that assessment is the issuing of data requests to the applicant. We expect to issue the data requests by September 3, 1999 with responses due from Duke Energy by October 4, 1999. Over the next few months, we will conduct publicly noticed workshops to review data responses and address identified concerns.

Since this is a coastal project, the California Coastal Commission is statutorily required to provide us with a report on the coastal issues from its perspective. The Coastal Commission requested additional information from Duke Energy on June 16, 1999. Responses to these requests are due from Duke Energy by August 31, 1999. We anticipate that the Coastal Commission report will be complete in time for us to include its findings and recommendations in the Preliminary Staff Assessment (PSA).

Our initial findings regarding the major issues discussed above, as well as other environmental and engineering findings will be presented in the PSA that is expected to be filed on January 25, 2000. After filing the PSA, we will conduct publicly noticed workshops to discuss the findings, recommendations and proposed conditions of certification. Based on these workshop discussions and other information that may be gathered, we will present our conclusions and recommendations in the Final Staff Assessment that we expect to file by March 28, 2000.

Staff's Proposed Schedule for the Moss Landing Power Plant Project

DATE	DAYS	EVENT
5/7/99		Moss Landing AFC filed
5/14/99		Applicant Provides Preliminary Facilities Study to the Cal-ISO and CEC (transmission interconnection study)
8/11/99	0	Energy Commission Deems AFC Complete
8/31/99	20	Responses to the Coastal Commission's data requests are due from Duke Energy
9/3/99	23	Staff files first set of data requests
9/7/99	28	Information Hearing, Issue Scoping & Site Visit
10/4/99	53	Data Request Responses Due From Applicant
12/11/99	120	Cal-ISO approval of the Preliminary Facilities Study
12/11/99	120	Monterey Bay Unified Air Pollution Control District Files Preliminary Determination Of Compliance (FDOC)
1/1/00	140	Draft Section 316(b) entrainment studies completed by the Regional Water Control Board (Section 316(a), draft thermal studies, 9/1/99).
1/25/00	165	Staff Files Preliminary Staff Assessment (PSA)
2/15 – 28/00	175	Staff holds various PSA workshops
2/11/00	180	Monterey Bay Unified Air Pollution Control District Files Final DOC (FDOC)
3/1/00	200	Final Section 316(b) entrainment studies completed by the Regional Water Control Board (Section 316(a), final thermal studies, 12/1/99).
3/28/00	227	Staff Files Final Staff Assessment (FSA)
4/17 - 29/00	246 - 259	Evidentiary Hearings
8/9/00	365	Adopt Decision

Key events that will dictate whether staff will be able to meet these dates are the applicant's timely response to staff's data requests; the applicant's submittal of information required by the Monterey Bay Unified Air Pollution Control District; the District's filing of its preliminary and final Determinations of Compliance; the applicant initiating permit processes with the U.S. Army Corps of Engineers and the California Department of Fish and Game; completion of Section 316(a and b) thermal studies; and the timely submittal of the detailed facility study and the timely review by the Independent System Operator. If these and other potential issues are resolved sooner than expected, staff may be able to file the PSA and FSA earlier than the proposed schedule indicates.