CALIFORNIA ENERGY COMMISSION
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1/19/2010

Mr. Greg Lamberg Senior Vice President
RADBACK ENERGY
145 Town and Country Drive, Suite 107
Danville, CA 94526

DOCKET
09-AFC-4
DATE 01/19/10
RECD. 01/19/10

RE: OAKLEY GENERATION STATION PROJECT (09-AFC-4)
DATA REQUEST SET 1 (#s 1-43)

Dear Mr. Lamberg:

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests, numbers 1 through 43, is being made in the areas of: air quality (#s 1-33), geology (# 34), land use (#s 35-39), paleontology (# 40), and transmission system engineering (#s 41-43). If possible, we would appreciate written responses to the enclosed data requests on or before February 15, 2010, or at such later date as may be mutually agreeable.

If you are unable to provide the specific information requested, need additional time, or object to providing requested/specific information, please send a written notice to both of the committee members overseeing application, and to me, within 20 days of receipt of this letter. If you are unable to respond within this time or are choosing to object to providing information, this notification must contain the reason(s) for not providing the information, and the grounds for any objections, or the need for additional time (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 653-4677 or email me at jdouglas@energy.state.ca.us.

Sincerely,

Joseph Douglas
Project Manager

PROOF OF SERVICE (REVISED 12/30/09) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 1/19/10
MS

Technical Area: Air Quality
Author: Joseph Hughes and Brewster Birdsall

Project Permits
BACKGROUND

The proposed project will require permits (the Preliminary Determination of Compliance and Final Determination of Compliance) from the Bay Area Air Quality Management District (BAAQMD or "District"). These permits will be integrated into the staff analysis. Therefore, staff will need copies of relevant correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Assessment.

DATA REQUEST

1. Please provide copies of all substantive District correspondence regarding the Oakley Generating Station (OGS) Project permit application, including e-mails, within one week of submittal or receipt. This request is in effect until the final Commission Decision has been recorded.

Supplemental Air Quality and Emissions Information
BACKGROUND

The applicant initially provided an application to the BAAQMD on July 6, 2009. After a review of the Determination of Compliance/Authority to Construct Application, the BAAQMD determined that the information contained therein was sufficient to undertake a Determination of Compliance review. The determination was made September 9, 2009 based on supplemental data submitted to the District. Energy commission staff has not yet received this data. Staff may develop additional data requests upon review of the supplemental data.

DATA REQUESTS

2. Please provide the supplemental data that was submitted to the District between July 6, 2009 and September 9, 2009 for Energy Commission staff review and analysis.
3. Please describe where revisions were made to the original Application for Certification (AFC) or provide an explanation stating that no revisions were made.

Operating Profiles
BACKGROUND

The AFC Project Description Section 2.3 states the project will operate as a base load power plant available more than 98 percent of the time but with an expected annual capacity factor of approximately 60 to 80 percent. The proposal in AFC Section 5.1.3.1 is for OGS to be permitted for no more than 11 hours per day and 5,525 hours of operation per year (AFC p. 5.1-6), with an expected facility capacity factor at 63 percent, to minimize impacts from particulate matter less than 2.5 microns in diameter (PM2.5). Agencies like the Energy Commission need to be able to easily track compliance of the OGS regarding its hours of operation. However, the AFC proposes different operating profiles to limit the daily and annual emissions for criteria pollutants other than PM2.5, which complicates compliance tracking. Staff would like a summary of the types of enforceable operating limitations that would be acceptable to OGS, other than limits on emission rates.

DATA REQUEST

4. Please describe the conditions of certification that would be acceptable to OGS for agencies tracking compliance with the proposed capacity factor limitations, for example by limiting the combustion turbines in terms of daily or annual heat input rates, operating hours, or energy output.

Air District Potential Extended Review Period
BACKGROUND

The Energy Commission staff is concerned that issues relating to the implementation of New Source Review (NSR) procedures for PM2.5 may cause delays in the OGS case. The PM2.5 attainment status of the Bay Area is in the process of changing, which may affect implementation of NSR provisions for PM2.5 and for PM2.5 precursors. Inspection of AFC Tables 5.1-18 and 5.1-19 indicates that project impacts of PM2.5 would likely exceed expected significance levels. AFC Table 5.1-18 indicates that particulate matter emissions less than 10 microns in diameter (PM10) and PM2.5 would occur at a rate of 0.396 grams per second per turbine (or 3.14 lb/hr per turbine), although other portions of the AFC show a proposed emissions rate of 7.5 lb/hr (Tables 5.1-7 and 5.1-12) or even up to 18.8 lb/hr (Appendix Table 5.1A-3). There is no explanation of whether or how daily PM10 and PM2.5 emissions would be kept below 3.14 lb/hr or even if this level of emissions would be feasible to achieve. The level seems to be arbitrarily selected to achieve compliance with the Class II Significance Levels shown in Table 5.1-19. Additionally, the AFC analysis was based on the Bay Area being "unclassified/attainment" for PM2.5, but the area now has a final designation as "nonattainment" that was announced by the U.S. Environmental Protection Agency on October 8, 2009. If the nonattainment designation becomes effective during this proceeding, then the applicability of federal nonattainment New Source Review (NSR) would need to be described and evaluated.

Regarding the evaluation of greenhouse gas emissions (GHG), the Air District is emphasizing the thermal efficiency of power plants, which is a new aspect of review that may or may not apply to OGS. The AFC does not identify any local District rules for GHG or the voluntary program of District review for GHG emissions.

DATA REQUESTS

5. Please identify how the OGS project would be affected if the proposed combustion turbines were required by reviewing agencies to achieve a PM10 and PM2.5 emission rate of 3.14 lb/hr as identified in AFC Table 5.1-18.

6. Please clearly identify the proposed maximum allowable PM10 and PM2.5 emission rates for the combustion turbines.

7. Please provide the citations for the Class II Significance Levels shown in Table 5.1-19, especially for PM2.5 and nitrogen dioxide (NO_2).

8. Please summarize the applicable requirements, including increment consumption analyses (identified in AFC Appendix 5.1C), that appear to be triggered by potentially exceeding the PM2.5 Class II Significance Levels, assuming turbine PM10 and PM2.5 emissions of 7.5 lb/hr per turbine, and by NO_2 exceeding the significance levels in Table 5.1-19.

9. Please update the impact analysis to reflect PM10 and PM2.5 impacts using the proposed maximum allowable PM10 and PM2.5 emission rate per turbine as identified in response to Data Request 6.

10. Please describe the applicability of the federal nonattainment NSR requirements of Title 40, Code of Federal Register Part 51 (40 CFR 51, Appendix S) for PM2.5.

11. Please describe whether the proposed OGS would be subject to the BAAQMD's evaluation of GHG emissions.

Carbon Monoxide Emission Levels
BACKGROUND

AFC Table 5.1-5 and others indicate that carbon monoxide (CO) emissions from the combustion turbines would be limited to 3.0 parts per million (ppm), but levels of 2.0 ppm CO should be achievable on a routine basis. Emission calculations in AFC Appendix (Table 5.1A-3) appear to be based on 2.0 ppm CO. Other similar cases before the Energy Commission using General Electric Frame 7FA turbines recently have proposed achieving the 2.0 ppm CO limit (for example, Avenal Power Center 08-AFC-01). Regarding the auxiliary boiler, it is not clear if the emission estimates reflect the use of the proposed "CO catalyst" (mentioned on AFC p. 5.1-1 and in AFC Appendix 5.1F), which staff assumes would be an oxidation catalyst.

DATA REQUESTS

12. Please either revise the proposed CO emission limits for the combustion turbines and heat recovery steam generators to 2.0 ppm or describe why this level would not be technically feasible, given that other similar projects indicate an ability to achieve this level. Verify that the impact analysis is consistent with this limit, or update this information to make it consistent.
13. Please clarify whether the proposed auxiliary boiler would include an oxidation catalyst and whether the emission reductions due to that catalyst have been taken into account in the Expected Auxiliary Boiler Emissions of AFC Appendix Table 5.1A-8.

Cooling System Emissions
BACKGROUND

The emission calculations for the wet surface air cooling tower (WSAC) associated with the evaporative fluid cooler in AFC Appendix Table 5.2A-6 (which is found in Appendix 5.1A) shows a PM2.5 fraction of 60 percent of the proposed PM10 from evaporative drift. However, Energy Commission staff normally adheres to an assumption that 100 percent of the cooling water total dissolved solids (TDS) would be converted to airborne particulate matter (U.S. EPA AP-42 Section 13.4, 1995). Worst-case cooling tower emissions assume that TDS becomes fully airborne PM10 and PM2.5 because other assumptions would only be supportable with source test monitoring, which is extremely difficult for cooling towers. Staff's approach was deliberated in advance of the April 2003 Staff Assessment for the Tesla Power Project and the April 2005 Staff Assessment for Blythe Energy Project Phase II (BEP2), and various other analyses. As in the previous cases, staff proposes to assume that 100 percent of the evaporative cooling water TDS is both PM10 and PM2.5. The AFC Section 5.1.4.2.1 claims that drift would be controlled to 0.003 percent, which is a less-efficient control level than typically achieved for large cooling towers.

DATA REQUESTS

14. Please provide substantiating evidence or copies of technical reports supporting the assumption that only 60 percent of the cooling tower PM10 would qualify as PM2.5.
15. Please describe whether drift eliminators achieving 0.0005 percent would be feasible for the evaporative fluid coolers.

Emission Offsets
BACKGROUND

The applicant proposes to offset nitrogen oxides (NOx) and volatile organic compounds (VOCs) to comply with BAAQMD New Source Review requirements by securing emission reduction credits (ERCs), but the proposed offset package is uncertain. Information (including confidential information from July 2009) submitted by OGS to Energy Commission staff does not provide sufficient detail regarding the specific emission reduction credits that would be used for the project. Staff eventually needs to know the exact location, the amount, and the offset ratios, including interpollutant offset ratios, applicable to each ERC that OGS proposes to use. This information may be submitted under confidential cover to staff, but staff expects to make this information available to the public with the staff assessment. Staff would require a finalized offset package to complete our analysis.

DATA REQUEST

16. Please provide a tabulated list showing expected emissions and emission offset accounting indicating the proposed quantity of offsets, including the locations of emission reductions, in a quantity sufficient to fully offset the projects emissions, including appropriate offset ratios. Please show the current updated ERC certificate number and former certificate numbers for certificates that have been recently split and/or re-issued in the name of the project.

Mitigation for Particulate Matter and Sulfur Oxide Emissions
BACKGROUND

The BAAQMD does not require offsets for particulate matter or sulfur oxide emissions. Because the project is likely to also affect air quality in the San Joaquin Valley Air Basin, Energy Commission staff may require additional specific mitigation for particulate matter (PM10/PM2.5) and sulfur oxides (SOx) to ensure localized benefits to the area impacted directly by the OGS project. A complete mitigation strategy would provide one-to-one emission reductions for proposed PM10/PM2.5 and SOx emission increases.

The Data Adequacy Supplement (dated August 20, 2009) raises many questions about how OGS proposes to use non-traditional emission reduction programs; these are programs that generate reductions ineligible for use in an air district's traditional ERC banking program. Street sweeping and tree planting are two programs being considered by the applicant for PM10 and PM2.5 mitigation. However, there is not yet any information in the record that explains whether these programs would provide a real or surplus reduction when compared to conditions that would exist without the project. For example, there is no information indicating that the City of Oakley would not be able to or required by the air district to fund street sweepers or tree planting absent OGS sponsorship. The actual emissions reduced by these programs depend highly on their permanence and upkeep, which may or may not be sponsored or controlled by the project. Any proposed reductions for particulate matter and SOx mitigation must be real, permanent, quantifiable, and enforceable in a manner similar to that required by BAAQMD Rule 2-1-201.

DATA REQUESTS

17. Please identify and quantify a complete package of proposed mitigation, especially for PM10 and PM2.5. For example, proposed strategies to reduce emissions in the San Joaquin Valley and the effectiveness of such strategies would need to be explicitly identified by OGS and preferably developed in consultation with Energy Commission staff before staff makes the information available in the staff assessment.

18. Please identify and quantify a mitigation strategy for proposed SOx emissions to ensure that OGS avoids contributing to additional PM10 and PM2.5 violations of ambient air quality standards.

Commissioning and Startup Emissions and Impact Analyses
BACKGROUND

The dispersion modeling files provided on CD-Rom with the AFC do not seem to include separate scenarios for combustion turbine commissioning. No-load and partial-load runs and running the combustion turbines while control systems are partially operational (as indicated in AFC Appendix 5.1A) would result in a variety of stack conditions and emission rates that do not appear to be reported in the AFC. Carbon monoxide (CO) emissions shown in Appendix 5.1A would range up to 540 lb/hr, but this is not shown in the summary of maximum emission rates in Table 5.1-20. NOx emissions analyzed on CD-Rom appear to reflect a maximum 1-hour emission rate of 99.9 lb/hr (in file "NOX1HRSTART.OUT"), but maximum hourly emissions during commissioning would be 120 lb/hr NOx as in Table 5.1-20.

DATA REQUESTS

19. Please confirm that the maximum emission rates during commissioning in Table 5.1-20 are accurately reported, given that higher emission rates of CO would occur with a single cold start.
20. Please confirm that the maximum NOx and NO_2 impacts have been considered given that the 120 lb/hr NOx commissioning emission rate would exceed the highest NOx emission rate in the analyses shown on CD-Rom with the AFC, and if not, update the impact analysis to reflect the maximum emission rates.
21. Please provide the expected stack conditions (exit velocity and temperature) for the various commissioning scenarios and confirm that the commissioning-phase dispersion modeling submitted with the AFC reflects the worst-case combination of stack conditions and emission rates.

Fire Pump Engine and Startup Emissions
BACKGROUND

AFC Section 5.1.5.7 indicates that fire pump operation would be managed so that testing of the fire pump engine would not occur during a startup of the combined cycle stationary gas combustion turbine system. However, it is not clear whether a prohibition on simultaneous engine use during turbine startups would be enforceable.

DATA REQUEST

22. Please describe the operating limitations that would be acceptable for ensuring that fire pump engine testing would not occur during a turbine startup.

Cumulative Modeling Analysis
BACKGROUND

Applicant states in Appendix 5.1H of the AFC that the regional 2008 estimated emissions inventory for the Bay Area Air Basin and a list of projects identified during a screening analysis of permit files conducted by the BAAQMD would be used to identify the sources used in the Cumulative Air Impact Analysis. The status of this analysis is unknown. As of late-October 2009, this analysis has not yet been submitted to the Energy Commission.

Staff needs to review the information delineating the locations of sources to be included in the cumulative analysis, stack parameters, and output files for the modeling analysis. We suggest

that the cumulative modeling identify the numerous existing power plants and consider them in the modeling effort. The existing sources that affect the baseline conditions and/or should be carefully considered and described by the analysis include:

Mirant Contra Costa Power Plant
GWF #4 Wilbur Avenue East Power Plant;
GWF #3 Wilbur Avenue West Power Plant;
Calpine Riverview Energy Center;
Calpine Los Medanos project; and
Calpine Delta Project.

Sources that should be included in a cumulative modeling effort include:

Recently-operational PG&E Gateway project;
Proposed Mirant Marsh Landing Generating Station project; and
Proposed Mirant Willow Pass project.

DATA REQUESTS

23. Please provide a copy of the results of applicant's BAAQMD permit file review regarding existing and planned cumulative projects located within eight miles of the OGS site, as offered in AFC Appendix 5.1H.
24. Please describe whether reasonably foreseeable sources in the neighboring air districts, such as Sacramento Metropolitan and San Joaquin Valley, have been identified for analysis and how they would be considered in the analysis.
25. Please provide the list of sources to be considered in the cumulative air quality impact analysis.
26. Please describe the progress for the cumulative air quality impact analysis following the protocol proposed in the AFC.

Normal Operations – Greenhouse Gas Emissions
BACKGROUND

In AFC Section 5.1.3.3.1, it is said that operational emissions of GHGs will be primarily from the combustion of fuels in the turbines, auxiliary boiler, and the fire pump engine. The AFC notes that support data for the GHG emissions evaluation can be found in Appendix 5.1A. The data in the appendix provides a GHG estimate for the turbine/HRSG of 1.94 million metric tons per year, but this does not agree with the level shown in AFC p. 5.1-11, which appears to be in English units of 1.94 short tons per year. Additionally, it is unclear if total project-wide GHG estimates include the auxiliary boiler and the fire pump.

DATA REQUESTS

27. Please provide a clear description of all sources of GHG emissions, including the fuel heat input rates and power output rates, along with the totals of those emissions for each project-related source.
28. Please provide a list of all sources other than the turbines, auxiliary boiler, and the fire pump that contribute to operational GHG emissions. This information should include the total emission estimates from these sources, i.e. leaking electrical equipment (sulfur hexafluoride), worker commutes, and material deliveries using trucks.

Construction Particulate Matter
BACKGROUND

The AFC Appendix 5.1E provides information on construction-phase air quality impacts that is not summarized in Section 5.1. Notably, AFC Appendix Table 5.1E-4 shows that construction activities would cause a new violation of 24-hour PM10 California Ambient Air Quality Standard. Staff considers this a potentially significant impact that may trigger the need for mitigation more rigorous than proposed. Mitigation available to avoid this potential impact would include more-vigilant dust control or shortened construction work hours. In previous cases with impacts exceeding the 24-hour PM10 standard, staff has recommended fence-line monitoring of dust concentrations during construction.

DATA REQUESTS

29. Please identify the phases of construction that would be most likely to cause PM10 24-hour concentrations over the California Ambient Air Quality Standard.

30. Please describe what additional emission control measures could be implemented to mitigate this impact to a level below the standard. One example would be fence-line monitoring of ambient concentrations, with the results being used to trigger various corrective actions.

Construction – Greenhouse Gas Emissions
BACKGROUND

AFC Appendix 5.1E construction data provides carbon dioxide equivalent (CO2e) emission estimates. The CO2e estimates are derived from parameters of diesel combustion and gasoline combustion for GHGs. It is not clear what assumptions are made to determine the estimated GHG emissions for the construction period. Various results that do not seem consistent are given in Appendix 5.1E as 9,622 tons of CO_2 from equipment for the entire period, or 10,034.6 tons of CO_2 from diesel-powered equipment only. None of the construction emissions information seems to include locomotive emissions from proposed rail deliveries of the massive equipment.

DATA REQUESTS

31. Please provide a clarifying table summarizing the sources and assumptions for developing the GHG emission estimates and the totals of those emissions from each source.

32. Please describe the vehicle miles of travel assumed and if the assumptions include onsite activities as well as offsite activities, such as material deliveries and construction worker commutes.

33. Please ensure that construction emission estimates include locomotive emissions from proposed deliveries by rail, if railroad traffic would be generated by the project. This emission estimate would focus on trips generated by the project and emissions in the Bay Area air basin.

Technical Area: **Geological Hazards and Resources**
Author: Patrick Pilling, Ph.D., P.E., G.E., D.GE.

BACKGROUND

Site-specific subsurface information is essential to completely evaluate a site with respect to potential geologic hazards and how the existing materials may impact design, construction, and operation of the facility. The information is also useful in establishing the geologic profile with respect to potential paleontological resources. The AFC includes a preliminary geotechnical report for the project site (Black & Veatch, 2009). This report includes three (3) boring logs and associated laboratory test results. The logs and test results indicate that clay soils with up to approximately 90 percent of the material passing a No. 200 sieve and Plasticity Index (PI) values between 15 and 32 are present at depth at the site, and could be present near the design finished grade elevation. The report states that the swelling potential for such materials is low based on the PI values.

DATA REQUEST

34. Please provide supporting documentation to support the statement that clay soils with a PI between 15 and 32 exhibit low expansion potential.

Technical Area: Land Use
Author: Negar Vahidi

BACKGROUND

The city of Oakley initially adopted the zoning districts of Contra Costa County at the time of incorporation in 1999. The project site is on land that is zoned Heavy Industrial and still retains the Contra Costa County zone designation. The city of Oakley has developed its General Plan and has designated the entire DuPont property, which includes a portion of the project site, a redevelopment zone. The city of Oakley is in the process of adopting a specific plan with proposed zoning ("SP-3" Specific Plan-3) for the entire DuPont property. As stated on page 5.6-23 of the AFC, a review of the Oakley zoning ordinance shows the most compatible zone district for a power plant would be a UE district; a Conditional Use Permit is required for a power plant within this zone district.

To conduct a thorough land use analysis of the project, Energy Commission staff needs information on the city of Oakley's interpretation of its own policy guidance documents, including the DuPont Specific Plan and the Municipal Code. Based on the information discussed above, staff believes siting the OGS at the proposed location would require the city of Oakley to rezone the site to UE and revise the DuPont Specific Plan to show the rezone of the site from SP-3 to UE. A conditional use permit to allow development of a power plant within the UE zoning district would also be a required action of the city, but for the jurisdiction of the Energy Commission.

DATA REQUESTS

35. Please provide the city of Oakley's position on the proposed project's overall consistency with its General Plan and Zoning Ordinance.

36. Please discuss is the current status of the Draft DuPont Specific Plan.

37. Please submit a request to the city of Oakley regarding rezoning the site to UE.

38. Please provide information from the city of Oakley regarding the Conditional Use Permit (CUP) findings it would make for the Project, but for the exclusive authority of the Energy Commission, and the conditions the city would attach to this Project, were it the permitting agency. Any conditions recommended by the city as part of a CUP would be considered by Energy Commission staff for inclusion in the conditions of certification for the Project.

39. Energy Commission staff will write a letter to the city of Oakley requesting detailed information regarding the proposed project's compliance with the city's applicable LORS and the conditions the city would attach to this Project, were it the permitting agency. Please provide Project information to the city of Oakley, with a copy to Commission staff, to facilitate their input regarding LORS conformance, conditions, and the required rezone of the Project site.

Technical Area: **Paleontological Resources**
Author: Patrick Pilling, Ph.D., P.E., G.E., D.GE.

BACKGROUND

Construction of the proposed facility will involve mass grading that will disturb native sediments. In order to minimize the potential impact to paleontological resources that could be present in native materials, a survey of the project area must be completed. Such a survey would include both a literature search and on-site evaluation. The AFC states that a paleontological resources survey of the project area and associated linears was performed and yielded no fossil material; however, no supporting information was provided to support this statement.

DATA REQUEST

40. Please provide supporting information with respect to field survey that was performed. Such information would include, but not necessarily be limited to, a letter from the paleontologist that performed the work that describes the work performed and summarizes the results of the work.

Technical Area: **Transmission System Engineering**
Authors: Laiping Ng
Technical Senior: Mark Hesters

BACKGROUND

The California Environmental Quality Act (CEQA) requires the identification and description of the "Direct and indirect significant effects of the project on the environment." The Application for Certification requires discussion of the "energy resource impacts which may result from the construction or operation of the power plant." For the identification of impacts on the transmission system resources and the indirect or downstream transmission impacts, staff relies on the System Impact and Facilities Studies for insuring the interconnecting grid meets the California Independent System Operator (California ISO) reliability standards. The studies analyze the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the studies determine that the project will cause a violation of reliability standards, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include the construction of downstream transmission facilities. CEQA requires the analysis of any downstream facilities for potential indirect impacts of the proposed project. Without a complete Phase I or Phase II Interconnection Study, staff is not able to fulfill the CEQA requirement to identify the indirect effects of the proposed project.

The Application for Certification (AFC) indicated that the Phase I interconnection study for 520 MW of the proposed 624 MW project was completed in July of 2009, staff needs a study or studies that analyze the impacts to the entire project.

DATA REQUEST I

Section 3.2 of the AFC indicated that the Oakley Generating Station (OGS) will be connected to the Contra Costa Substation. Figure 3.2-2 shows the conceptual one-line diagram for the connection. Staff requests addition details of the proposed modification to the existing PG&E Contra Costa Substation.

41. Provide a detailed physical layout drawing of the Contra Costa Substation with the proposed OGS. Show all major equipment, ratings, and transmission outlets.

42. To accommodate the OGS into the Contra Costa Substation, the existing 230 kV bus requires extension. A. Please address whether the bus extension would occur inside the Contra Costa Substation fence line. B. Discuss whether any additional bus sectionalized breakers in the drawing will be required. C. Provide detailed information and a physical layout drawing of the proposed changes. Show all major equipment, ratings, and transmission outlets.

DATA REQUEST II

The AFC stated that the California ISO Phase I Interconnection Study for the first interconnection request of 520 MW was completed on July 2009. The Phase I Interconnection Study for the second interconnection request of 131 MW would not be completed until April 2010. Staff requests a complete Phase I Interconnection Study (or studies) for the proposed 624 MW OGS to proceed with staff analysis.

43. Provide the California ISO Phase I Interconnection Study of the proposed 624 MW OGS to the California ISO control grid. The Study should analyze the system impacts with and without the project during peak and off-peak system conditions, and demonstrate

conformance or non-conformance with the utility reliability and planning criteria with the following provisions:

a. Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation.

b. Analyze the system for N-0, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation.

c. Analyze short circuit duties.

d. Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.

e. Provide a list of contingencies evaluated for each study.

f. List mitigation measures considered and those selected for all criteria violations.

g. Provide electronic copies of *.sav and *.drw PSLF files.

h. Provide power flow diagrams (**MW, % loading & P. U. voltage**) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear. Provide the pre and post project diagrams only for an elements largest overload.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
FOR THE *OAKLEY GENERATING STATION*

Docket No. 09-AFC-4
PROOF OF SERVICE
(Revised 12/30/09)

APPLICANT

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DECLARATION OF SERVICE

I, Maria Santourdjian, declare that on January 19, 2010, I served and filed copies of the attached Data Requests Set 1 (#s 1-43) for Oakley Generation Station Project (09-AFC-4). The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[http://www.energy.ca.gov/sitingcases/contracosta/index.html].** The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

For service to all other parties:

_x__ sent electronically to all email addresses on the Proof of Service list;

_x__ by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

_x__ **sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);**

OR

_____depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-4
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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

Originally Signed by
Maria Santourdjian