

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512

January 11, 2007



Mr. Andy Welch, Vice President
Competitive Power Ventures
8403 Colesville Road, Suite 915
Silver Spring, MD 20910

DOCKET	
06-AFC-9	
DATE	JAN 11 2007
RECD.	JAN 12 2007

Dear Mr. Welch:

**DATA REQUEST 1 THROUGH 116 FOR THE COLUSA GENERATING STATION
(06-AFC-9)**

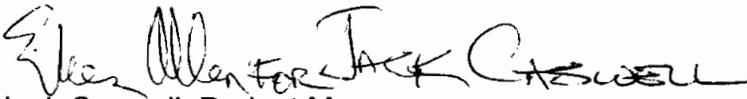
Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff is asking for the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed 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 (#1-116) is being made in the areas of Air Quality, Alternatives, Biological Resources, Cultural Resources, Geology, Land Use, Socioeconomics, Soil and Water Resources, Traffic and Transportation, Transmission System Engineering, Visual Resources and Worker Safety and Fire Protection. Written responses to the enclosed data requests are due to the Energy Commission staff on or before February 12, 2007, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both Commissioner John L. Geesman, Presiding Committee Member for the Colusa Generating Station project, and to me, within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 653-0062, or email me at jcaswell@energy.state.ca.us.

Sincerely,


Jack Caswell, Project Manager
California Energy Commission

Enclosure
cc: Dockets 06-AFC-9

PROOF OF SERVICE (REVISED _____) FILED WITH
ORIGINAL MAILER FROM SACRAMENTO ON 1/12/07

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**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Air Quality

Author: William Walters

AIR QUALITY PERMIT APPLICATION

BACKGROUND

The proposed project will require permits (the Preliminary Determination of Compliance and Final Determination of Compliance) from the Colusa County Air Pollution Control District (CCAPCD or "District") and a Prevention of Significant Deterioration (PSD) permit from the United States Environmental Protection Agency (USEPA). The CCAPCD permits are integrated into the staff analysis, and the PSD permit is also of interest as issues could arise that would impact the air quality analysis. Therefore, staff will need copies of all correspondence between the applicant and the District and USEPA in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary and Final Staff Analysis. In addition, if there is dialogue between EPA and the applicant that results in permit changes to the District FDOC in the period after the Evidentiary Hearings up to the final Commission Decision, then staff can recommend changes to the PMPD to reflect such changes.

DATA REQUEST

1. Please provide copies of all substantive correspondence regarding the CGS permit applications with the District and USEPA, including e-mails, within one week of submittal or receipt. This request is in affect until the final Commission Decision has been docketed.

EMISSION OFFSETS

BACKGROUND

The emission offset package identified by the applicant is substantial but not yet complete to meet District rule requirements for NO_x and PM₁₀. For this project to be expedited, the applicant must obtain additional emission reduction credits (ERCs) to complete the offset package. Staff needs a finalized and complete offset package prior to the completion of the Preliminary Staff Analysis.

DATA REQUEST

2. Please provide the final list of the ERC sources that the applicant has bought or has option contracts to buy that provides a complete offset package for NO_x and PM₁₀.
3. Please clearly identify all distance and interpollutant offset ratios that, by District rule, need to be applied to each of the new ERC sources not previously supplied in the data adequacy response.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

4. Please provide the quantity, the location, the method of emission reduction, and the date of emission reduction for each of the new ERC sources not previously supplied in the data adequacy response.
5. If the final offset package includes the proposal to use interpollutant offsets for offsetting a portion of the project's PM10 emissions please provide:
 - a. The source and quantity of PM10 precursor pollutant being used to offset the project's PM10 emissions;
 - b. The proposed interpollutant offset ratios, and the technical analysis that supports the appropriate interpollutant offset ratio;
 - c. Documentation from the District to confirm that the interpollutant emission offset ratio is acceptable.

BACKGROUND

Staff needs additional information to both describe and assess the two stationary ERC sources included in the offset package information provided as part of the data adequacy response.

DATA REQUEST

6. Please provide the date of emission reduction and a description of the original emission source(s) that were included in the two stationary emission sources proposed to be used. These descriptions should include the original facility name(s) for each of the emission sources that were shutdown to create these ERCs.

BACKGROUND

Staff needs additional information to assess the agricultural burning cessation ERCs. Both the type of crop and the specific calculations used for each type of crop are needed to complete staff's analysis of these ERCs.

DATA REQUEST

7. Please provide, in a single table, the type of crop and acres associated with each proposed agricultural burning cessation ERC source.
8. Please provide the emission reduction calculation methods and assumptions associated with each type of crop related to the proposed ERCs, or for each ERC if the emission reduction calculations are not consistent for each type of crop and vary based on site specific factors other than acreage.

BACKGROUND

Staff needs additional information to determine if the project's proposed emission reduction credits will mitigate the project's PM2.5 emissions impacts. The project's

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

operating particulate emissions are described as all PM_{2.5} due to being from combustion sources, and the stationary source PM₁₀ credits that are being proposed are noted to come from combustion source reductions. However, it is unclear whether PM₁₀ emission reduction credits from agricultural burning, an uncontrolled combustion process, are also essentially all PM_{2.5}. Staff needs additional information to assess the use of the agricultural burning cessation ERCs with respect to PM_{2.5} impact reduction.

DATA REQUEST

9. Please provide information regarding the particle size for particulate emissions from agricultural burning, specifically for the types of crops related to the proposed agricultural burning cessation ERCs.

BACKGROUND

The applicant is proposing a VOC for NO_x interpollutant offset ratio of 1.4 to 1. While staff is aware that this offset ratio is currently acceptable to the District, and that this question was raised several years ago during the processing of the withdrawn Colusa Power Project (01-AFC-10) siting case, no updated calculations or other technical justification for this interpollutant offset ratio have been provided for this project. Staff needs additional information on this interpollutant offset ratio to evaluate its effectiveness in mitigating the project's regional ozone impacts.

DATA REQUEST

10. Please provide calculations, using recent pollutant emission data and ambient monitoring data as appropriate, or other appropriate technical justification to provide a demonstration that the proposed interpollutant VOC for NO_x offset ratio would fully mitigate the project's impacts to regional ozone pollution levels.

OPERATING EMISSIONS

BACKGROUND

Staff is concerned that the proposed operating Turbine/Heat Recovery Steam Generator (HRSG) emission limits for PM₁₀ are very high in comparison to other recent projects of similar size and design. The applicant is proposing turbine/HRSG PM₁₀ emission rates of 12.8 to 12.9 lbs/hour and 19.9 to 20.1 lbs/hour for full turbine load without and with duct firing, respectively. These emission rates are considerably higher than recent General Electric (GE) F-frame projects with comparatively large duct burners that have requested PM₁₀ limits on the order of 9 to 11 lbs/hour and 11.5 to 14 lbs/hour for full turbine load without and with duct firing, respectively. Additionally, source test data that staff has reviewed to date would support the use of PM₁₀ emission limits that are substantially lower than those being proposed. These conservative emission limits significantly increase the project's PM₁₀ offset needs which is a concern for the project. Staff requests additional information to confirm the need for the requested turbine/HRSG PM₁₀ emission limits.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

11. Please provide appropriate GE emission guarantees and test results from similar turbines that substantiate the need for the requested turbine/HRSG PM10 emission rates of 12.8 to 12.9 lb/hour and 19.9 to 20.1 lb/hour for full turbine load without and with duct firing, respectively.

BACKGROUND

There are apparent errors in the quarterly emission calculations presented in air quality Appendix G3, Attachment 1. The average operating hours for the third quarter are set to zero when they should be approximately 1000 hours. The assumed unsteady state (startup and shutdown intervals) operating hours (including the number of cold, warm and hot starts, and the number of shutdowns) are significantly different in the third quarter than what is presented in the other three quarters. Staff requests that the information presented in this Attachment 1 be reviewed and corrected where necessary.

DATA REQUEST

12. Please provide a corrected table for the third quarter emission calculations presented on page 3 of 5 in Appendix G3 Attachment 1.
13. Please confirm all of the unsteady state hour assumptions for each quarter presented in Appendix G3 Attachment 1.

BACKGROUND

The daily NO_x, CO, and VOC emissions estimates for the gas turbine/HRSG shown in Table 8.1-17 do not match the emission assumptions provided on page 8.1-6 using the hourly emissions shown for steady and unsteady state operations in Tables 8.1-14 and 8.1-15. Staff needs information to determine if the basis described on page 8.1-6 is incorrect or if the specified values in Table 8.1-17 are incorrect.

DATA REQUEST

14. Please either provide a revised description of the worst-case daily gas turbine/HRSG operations or revise Table 8.1-17 with 24-hour emissions of NO_x, CO, and VOC that conform to the operating assumptions specified on page 8.1-6 of the AFC.

BACKGROUND

The natural gas fuel sulfur assumption used for the project (approximately 0.22 gr/100 scf) is low in comparison with other recent projects that would also receive natural gas from PG&E. This assumption may be a product of considering limited recent fuel composition data. Staff needs additional information to confirm that the lower sulfur content is a reasonable short-term value and long-term average value. The sulfur content assumption is directly related to the amount of SO₂ emissions and the related offset determination.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

15. Please provide additional, recent data from PG&E that confirms that the assumed fuel sulfur content of 0.22 gr/100 scf is a reasonable short-term value and long-term average value.

BACKGROUND

The daily emission potential of the auxiliary boiler, emergency generator engine, and firewater pump engine is unclear. Staff requires additional information to determine the daily emissions potential for these three emission sources and the worst-case project total daily emissions.

DATA REQUEST

16. Please confirm that the worst case daily emissions for the auxiliary boiler would be based on 24 hours per day of operation.
17. Please confirm that the worst-case normal operation of the emergency generator engine and firewater pump engine is one hour per day.
18. Please identify the maximum concurrent emission source operation and provide the calculated all emission source worst-case daily emissions.

OPERATING EMISSIONS MODELING

BACKGROUND

The operating emissions modeling appears to include the auxiliary boiler, emergency generator engine, and the firewater pump engine; however, the assumptions used to model those sources in combination with the gas turbine/HRSG for the different modeling timeframes do not appear to be provided in the AFC or AFC appendices. Staff needs additional information on the modeling cases to complete the evaluation of the project.

DATA REQUEST

19. Please provide the operating and emissions assumptions used for all emission sources to complete the 1-hour, 3-hour, 8-hour, 24-hour and annual operating emissions modeling runs.

BACKGROUND

The operating emissions modeling assumptions appear to include an unrealistically high velocity assumption for the emergency generator engine (119.44 m/s) and what is likely a low velocity assumption for the firewater pump engine (24.66 m/s). Staff needs additional information to determine if these input parameters need to be revised.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

20. Please provide information that confirms the exhaust stack diameters and velocities for the emergency generator engine and the firewater pump engine.

BACKGROUND

The operating emissions modeling analysis results presented in the AFC do not present results for PM_{2.5} impacts. Staff needs more information to assess the project's impacts on the PM_{2.5} ambient air quality standards.

DATA REQUEST

21. Please expand Table 8.1-24 to include PM_{2.5} 24-hour and annual impacts.

BACKGROUND

The NO_x Ozone Limiting Method modeling (NO_x_OLM) is restricted to 2001 through 2004, and does not include 2005, while the background NO₂ concentration is the average of 2004 and 2005 maximum levels. This approach is inconsistent and may not properly indicate the maximum project impacts, which might otherwise be shown to exceed the 1-hour ambient air quality standard. Additionally, it should be noted that the other pollutant modeling runs include 2001 through 2005. The cumulative operating impacts for NO₂ are shown in Table 8.1-28 to be essentially at the ambient air quality standard, without any room for additional sources or emissions. Staff needs additional information to examine whether the inconsistent modeling analysis approach creates potential issues for the NO₂ impact analysis and determine if other measures can be used to minimize potential project NO₂ impacts.

DATA REQUEST

22. Please explain why NO_x_OLM modeling was not performed for 2005. If ozone files are available please perform a NO_x_OLM modeling run for 2005 for operational and cumulative 1-hour NO_x impacts.
23. Please explain the rationale for the procedure used to determine the NO₂ background concentration, which was different than the procedure used for all other pollutants.
24. The peak 1-hour NO_x impacts from operation (shown in Table 8.1-24 and Table 8.1-28) occur during turbine startup, with the assumption that both turbines are in simultaneous startup. In order to minimize a potential significant impact, please indicate if a condition of certification that would require sequential rather than simultaneous turbine startups would be acceptable.
25. In lieu of a startup condition of certification identified above, please provide a revised NO_x_OLM modeling analysis that uses both hourly monitored NO₂ and hourly monitored ozone concentrations for 2001 through 2005 to clearly

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

demonstrate that simultaneous turbine startup would not cause an exceedance of the 1-hour ambient air quality standard.

EMISSION CONTROL TECHNOLOGIES

BACKGROUND

There is very little description regarding the assumed control technologies that will be used to ensure the emission values for the auxiliary boiler, the emergency generator engine, and the firewater pump engine. Additionally, manufacturer data sheets, stated in the AFC to be provided in Appendix G, were not provided. Staff needs additional description of the control technologies assumed for these three emission sources.

DATA REQUEST

26. Please provide a brief description of the auxiliary boiler's assumed emission control technology and a copy of the vendor supplied emission factors that were noted on page 8.1-7 of the AFC.
27. Please provide a brief description of the emergency generator engine's assumed emission control technology and a copy of the manufacturer's data sheets that were not provided in Appendix G as stated on page 8.1-7 of the AFC.
28. Please provide a brief description of the firewater pump engine's assumed emission control technology and a copy of the manufacturer's data sheets that were not provided in Appendix G as stated on page 8.1-7 of the AFC.

INITIAL COMMISSIONING

BACKGROUND

Staff needs additional information regarding the initial commissioning phases/tests in order to evaluate the initial commissioning impact analysis. Specifically, the criteria pollutant emissions and exhaust parameters for each type of commissioning phase/test and the time required for each type of commissioning phase/test are needed to evaluate the project impacts and confirm the total initial commissioning period emission estimate.

DATA REQUEST

29. Please provide a brief description of each type of phase/test that will be performed to complete the initial commission interval for each turbine/HRSG.
30. Please provide a table that gives the hourly pollutant emissions, the number of hours required, and the exhaust parameters for each type of initial commissioning phase/test.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

STARTUP AND SHUTDOWN EMISSIONS

BACKGROUND

The startup emission levels shown in Table 8.1-15 appear to be too low for PM10 and SO2 emissions. Additionally, staff does not have enough information to assess whether the shutdown PM10 and SO2 rates are reasonable. Staff needs additional information regarding the startup/shutdown event assumptions and PM10/SO2 emissions estimate.

DATA REQUEST

31. Please explain assumed load ramping along with maximum hourly and total fuel consumption for the three types (cold, warm and hot) of startup events and shutdown.
32. Please identify if duct firing can be initiated during the cold/warm/hot startup events and if duct firing would be shutdown prior to initiating the turbine shutdown event.
33. Please explain how the startup SO2 maximum hourly emission rates are estimated to be about one-third of the normal hourly full load no duct firing emission rates.
34. Please explain how the startup PM10 maximum hourly emission rates are estimated to be marginally less than the normal hourly full load emission rates with no duct firing.
35. Please provide calculations to show that the estimated shutdown PM10 and SO2 emission rates are reasonable given the assumed fuel flow during a shutdown event.

CONSTRUCTION EMISSIONS

BACKGROUND

Staff requires additional information to understand the emission factors used to calculate the offroad construction equipment emissions as shown in Appendix G2, Tables G.2-4 to G.2-8.

DATA REQUEST

36. Please indicate the emission factors source and provide a table of the emission factors used in the offroad construction equipment emissions estimate.
37. If horsepower is used as a basis for the emission factor determination please provide the assumed horsepower size for each piece of offroad equipment assumed in the construction equipment emissions estimate.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

BACKGROUND

Staff requires additional information to understand the emission factors and operating basis used to calculate the fugitive dust emissions. Specifically, additional information on the assumed soil moisture content is necessary to assess the fugitive dust emission calculations. Staff is concerned that the high moisture content assumed (i.e., 18 percent) is primarily a function of the time of the tests conducted in 2001 (March) and do not reflect soil moisture at other times of the year. Additionally, the geotechnical report indicates that any additional water would cause these soils to swell, which to staff means that watering of these soils for particulate control could create engineering problems. Staff needs additional information to assess whether the soil moisture content assumption used in the fugitive dust emission calculations should be revised.

DATA REQUEST

38. Please indicate if additional testing was performed during a summer or fall period to confirm the very high latent soil moisture contents found in the March 2001 samples from the geotechnical report (Appendix Q) that appears to be used as the basis for the 18 percent soil moisture content assumption.
39. Please provide documentation that the site's very fine soils can be adequately worked (graded and compacted) with this high moisture content and with the addition of water used for particulate emissions control.

BACKGROUND

Staff needs additional information to understand the use of a fugitive dust emission control efficiency factor in addition to the assumption of already very moist soils. Staff believes that the assumption of 18 percent soil moisture is questionable, and that an additional 80 percent control efficiency for watering is double counting the soil watering emission control factor.

DATA REQUEST

40. Please provide information that supports the use of the 80 percent fugitive dust control factor for watering on top of the 18 percent soil moisture assumption used in the uncontrolled fugitive emission calculations.

BACKGROUND

Staff requires additional information to understand the construction assumptions used to calculate the unpaved road fugitive dust emissions. Specifically, unpaved road travel is assumed to only occur during the first three months of construction. Staff needs to understand what measures will ensure that material deliveries, construction employee vehicles, etc. are not traveling on unpaved roads after the first three months of construction.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

41. Please indicate if the site will have onsite paved access roads after the first three months of construction, and if not provide an estimate of unpaved road travel and emissions for the remainder of the project construction.
42. Please confirm that the entire route into the site is paved, and considering the number of unpaved roads in the area, provide a description of the measures that will be taken to ensure that project construction traffic will only travel on paved roads into and out of the site.

BACKGROUND

Staff needs additional information to understand if the construction of the project's linear facilities (transmission interconnection, natural gas pipeline, and water pipeline) are properly included in all of the emission calculations. Table G.2-3 clearly shows some of the linear construction being included in the disturbed area fugitive dust calculations; however, the work activity for some of the related necessary equipment for linear construction appears to be missing and other assumptions regarding schedule in Table G.2-3 and Tables G.2-4 through G.2-8 appear in conflict. Staff needs additional information to understand the schedule and emissions associated with the linear construction.

DATA REQUEST

43. Please provide the anticipated schedule of construction for the natural gas pipeline, water pipeline, and transmission interconnection in relation to the 24 month schedule identified in Appendix G2.
44. Please identify the specific construction equipment necessary for the construction of the natural gas pipeline, water pipeline, and transmission interconnection and, considering the provided construction schedule, revise Tables G.2-4 through G.2-8 as appropriate.
45. Please indicate why the natural gas pipeline area is not included in Table G.2-3 or add it to the table as appropriate.

CONSTRUCTION DISPERSION MODELING

BACKGROUND

Several of the construction dispersion modeling files improperly spread the daily emissions over 24 hours rather than over the actual daily construction schedule. The construction modeling needs to be corrected to model emissions during the actual daily construction schedule.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

46. Please provide revised construction modeling files that incorporate all revisions to construction emissions that are provided in response to the other data requests, and that are corrected to model actual hour of day emissions based on the assumed construction schedule.

BACKGROUND

The construction modeling results presented (Table 8.1-24) for PM10 appear to only include fugitive dust but do not include both fugitive dust and construction equipment emissions impacts together. Additionally, the 24-hour impact results presented for PM10 are based on the high sixth high predicted impact rather than actual peak 24-hour results. Staff needs to have the construction PM10 modeling files to be corrected and explanation regarding the presentation of results.

DATA REQUEST

47. Please provide revised construction PM10 modeling files that incorporate both fugitive dust and construction equipment emission sources.
48. Please explain why the impacts results provided for PM10 are derived from the high sixth high predicted impact results.

CONSTRUCTION FINE PARTICULATE EMISSIONS AND IMPACTS

BACKGROUND

Staff needs a construction PM2.5 (fine particulate) emission estimate and modeling analysis to assess the project's impacts on all criteria pollutants.

DATA REQUEST

49. Please provide a construction PM2.5 emission estimate. The PM2.5 emission estimate can be calculated per the specific fugitive dust emission calculation methodologies or by using appropriate PM2.5/PM10 emission fractions created by CARB as part of the California Emission Inventory Development and Reporting System (CEIDARS). The CEIDARS particulate fraction data can be uploaded at http://www.aqmd.gov/ceqa/handbook/PM2_5/finalAppA.doc.
50. Please provide a construction PM2.5 modeling impact analysis including a summary of the modeling results and copies of all electronic modeling files.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Alternatives

Author: Jack W. Caswell

BACKGROUND

Staff requires additional information to adequately compare and discuss feasible project alternatives. The AFC does not provide all of the basic information necessary for a comparative review of the alternatives. The following information is necessary for a complete alternatives analysis.

DATA REQUEST

51. Please provide a map that shows the location, elevation and topography of the two alternatives sites as described in Section 9.0, page 9-3 of the AFC.
52. Provide a map that shows the site location in relationship to the transmission routes, water, natural gas lines, and any other associated facilities (e.g., linear facilities) that would be required for the two alternative sites discussed in Section 9.0, page 9-3.
53. Provide a list of site location alternatives that were reviewed but not considered as feasible due to the site selection criteria as discussed on page 9-2 section 9.5.
54. If biological information (e.g., a biological survey) was gathered that is specific to the two alternative sites, please provide that information.
55. If cultural resource information (e.g. a cultural resource survey) was completed that is specific to the two alternative sites, please provide that information.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Biological Resources

Author: John Mathias

BACKGROUND

Figure 8.2-2A of the AFC mapped a general area of vernal pool and alkali grassland habitat. There is also some general discussion about the proximity of the transmission towers to the vernal pool complex (AFC page 8.2-21.) US Fish & Wildlife Service guidance on vernal pools states impacts are likely when project development occurs within 250 feet of a vernal pool. Staff needs additional information to make a determination regarding potential impacts to the vernal pools during construction and maintenance of the transmission towers and during construction of the Glenn-Colusa Canal bridge replacement and road realignment.

DATA REQUEST

56. Please provide a description of the types of equipment to be used during the construction of the transmission towers and line pulling, and indicate what time of year the work is likely to occur. Explain what types of impacts the equipment are expected to have on soils, especially during wet periods.
57. Please provide a map that shows the location of any lay-down areas that may be used during construction of the Glenn-Colusa Canal bridge replacement and road realignment.

BACKGROUND

Bridge replacement work is proposed at Teresa Creek. The underside of the bridge was inspected for bats on March 9 and March 26, 2001 and August 24, 2006, according to AFC page 8.2-17. No guano or staining was detected even though there are several species that may potentially occur. Staff is concerned about possible impacts to bats during demolition of the existing bridge.

DATA REQUEST

58. Please provide staff with a discussion on how impacts to bats will be avoided during the replacement of the Teresa Creek Bridge.

BACKGROUND

According to Section 3.6.3.1 (page 3-20) in the AFC, a temporary bridge could be used at Teresa Creek while replacement of the permanent bridge is being completed. Culverts would be placed in Teresa Creek as a temporary bridge and fill material would be placed on top of them.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

59. a. Please identify the culvert's size and provide a discussion of anticipated impacts to stream depth and flow rate in Teresa Creek while the culverts are in place, and discuss the significance.
- b. For any significant impacts identified above, discuss mitigation options.

BACKGROUND

The Applicant's proposed mitigation measure BIO-18 states that a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) will be prepared prior to construction; staff typically requests a working draft be submitted prior to publication of the Preliminary Staff Assessment if state and/or federally listed species could be affected by a proposed project.

DATA REQUEST

60. Please provide staff with a draft of the BRMIMP which identifies all sensitive biological resources, timing of construction (and any times when construction is restricted), all proposed biological resource mitigation measures, monitoring and compliance measures in federal and state agency terms and conditions, local agency permits, monitoring methodologies, and proposal for monitoring objectives and performance standards.

BACKGROUND

The AFC includes drawings of the power plant access road (Figures 3.3-1 and 3.5-4), but staff could not find a discussion of construction techniques. No drawings or discussion are provided regarding proposed roads to the construction lay-down area and the transmission line towers.

DATA REQUEST

61. Please provide specific information regarding any grading or excavation needed (e.g., depth of cut, amount of fill, source of fill material, location of culverts if road is bermed) and the types of materials to be used (e.g., use of geo-textiles) for the power plant access road.
62. a. Please provide specific information on the composition and construction of the roads to the construction lay-down area and transmission lines. Please indicate what best management practices will be in place, whether any fill be used, and the source of any fill material.
- b. Provide a discussion of which road segments will be restored after construction and include a description of the proposed seed mix, seeding rate, application techniques, and timing of restoration.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Cultural Resources

Author: Cindy Baker

BACKGROUND

Reliant Energy sent letters describing the project to Native Americans on February 28, 2001. The Native American Heritage Commission (NAHC) provided Reliant Energy with a list of Native American contacts in the area. Reliant Energy sent letters to all the individuals and groups on the list provided by the NAHC. E&L Westcoast did not provide information that they have contacted the NAHC or sent letters to all the individuals and groups on the list provided by the NAHC. The list of Native American contacts interested in the area may have changed in the last five years. When the NAHC provides a list of Native Americans who wish to be contacted regarding construction disturbances on land where they have heritage concerns, the NAHC requests that the project make a follow-up telephone call to Native Americans who have not responded.

DATA REQUEST

63. Please request the NAHC to provide the applicant with a current list of Native American contacts in the project area, and send letters to all the individuals and groups on the list regarding the current project.
64. Please provide copies of all responses to the letter.
65. Please make one telephone call to Native American individuals or groups listed by the NAHC who have not responded within two weeks to ensure that they have received the correspondence and gather any information they may have regarding cultural resources in the project area. Please provide documentation for each call, and note any comments regarding the project area provided by the Native Americans.
66. Please provide copies of any additional written responses received from Native Americans. If responses have been received by telephone, please provide a summary of each conversation. If the location of archaeological sites may be revealed in the information, please provide the responses under confidential cover.

BACKGROUND

According to CEQA Guidelines Section 15064.5 (a) (2), cultural resources included in a local register of historical resources must be treated as significant by public agencies unless a preponderance of evidence demonstrates that a resource is not significant.

DATA REQUEST

67. Please review local registers maintained by Colusa County and provide a list of any cultural resources (prehistoric or historic archaeological or historic built environment) listed by the County within ½-mile of the project area.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

BACKGROUND

AFC Section 8.3.1.5.1 specifies historical and archaeological societies as sources of information used to identify the cultural resources that might be impacted by the project. It appears that the research was conducted as part of the Reliant Energy project in 2001, not for the E&L Westcoast project. Current information from local archaeological and historical societies, county lists, and other interested groups is essential to the process of identifying all the cultural resources.

DATA REQUEST

68. Please provide a discussion of the local historical and archaeological organizations that were contacted for this application. Include information regarding responses that were received and historical or archaeological resources that were identified.

BACKGROUND

AFC Section 8.3.2.2.1, page 8.3-16, states that the Cottonwood-Vaca-Dixon 230 kV transmission line is a property potentially eligible for the National Register of Historic Places (NRHP). For CEQA purposes, staff deals with the California Register of Historical Resources (CRHR), with properties that are eligible for the National Register also eligible for the CRHR. The associated discussion does not make clear whether both of the parallel transmission lines that, apparently, constitute the Cottonwood-Vaca-Dixon 230 kV transmission line are together potentially eligible, or only one of them is. Staff needs to clarify how many potentially eligible resources are present.

AFC Appendix J, page J-3, indicates that, within the APE, the present towers of both lines of the Cottonwood-Vaca-Dixon 230 kV transmission line appear to be similar to Frank Baum's original 1920s engineering drawings, suggesting that this part of the potentially significant transmission line has integrity of design, materials, and workmanship. However, Appendix J1 states that "significant portions of the line have been rebuilt" (page J-7, section J.4.1). The discussion does not indicate exactly what "rebuilt" means, and no source for that information is provided. Assuming that the Cottonwood-Vaca-Dixon 230 kV transmission line is an eligible historic resource under CEQA, staff needs to have the integrity of this line evaluated, so that the significance of the project's impacts on the line can be assessed.

Pacific Gas and Electric Company has conducted a NRHP evaluation of the Vaca-Dixon Substation in which it was determined that the substation and its accompanying switchyard (including transmission lines approaching from the north) constituted a historic district. The AFC does not appear to consider the Cottonwood-Vaca-Dixon 230 kV transmission line as part of a historic district. Staff needs to have this possibility evaluated.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

69. Please research the Cottonwood-Vaca-Dixon 230 kV transmission line and determine if both lines are the same age and could equally qualify for the CRHR. If the two do not equally qualify, please indicate which one does qualify, or, if they both qualify, in what ways they qualify, and for what reasons. Also, please determine whether one or both of the lines is/are historically associated with the Vaca-Dixon Substation.
70. Please provide evidence on how many towers there are in the entire Cottonwood-Vaca-Dixon 230 kV line and determine, through research and/or PG&E expert opinion, how many of them have been altered. Additionally, please describe the documented alterations.
71. Please determine if the transmission line in the project area is associated with the Vaca-Dixon Substation and if it could be considered part of that historic district.

BACKGROUND

On AFC page 3-25 (3.9.2.1), the applicant reports that four towers will be refitted and that two towers will be removed, but it is not clear which of the two parallel transmission lines will be affected by these changes.

DATA REQUEST

72. Please identify how many existing towers in each of the two lines will be removed and how many existing towers in each of the two lines will be altered and provide a drawing delineating the towers to be replaced. Please specify the types of alterations that are proposed and state if these changes will alter the integrity of the towers as contributing elements of the transmission line.

BACKGROUND

AFC page 8.3-18 provides a discussion of cumulative impacts, but states it will not affect any historic resources. The application does not provide a list of all proposed projects in the project region. It is not clear whether any projects may contribute to cumulative impacts to cultural resources in the area.

DATA REQUEST

73. Please provide a discussion of cumulative impacts to the transmission line that describes projects that have been proposed or are under construction within a ½-mile radius of the proposed Colusa Generation Station project. Please discuss all types of development including residential.

BACKGROUND

The California Historical Resources Information System has identified the proposed plant site as a location that has a low probability for archaeological resources. On AFC

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

page 3-18, Section 3.5.8, states that approximately 330,000 cubic yards of cut and fill material will be required on the project site. Staff needs more information to assess potential project impacts to buried archaeological resources on the project site.

DATA REQUEST

74. If any additional geotechnical borings are completed for this project within the coming nine months, please have the borings examined by an archaeologist on site and provide a discussion of the findings.
75. Please provide a discussion that identifies the probable locations of intrusion into native soil caused by either excavation or fill removal and replacement.
76. If removed soils will be disposed of off-site and/or new soils brought in and if disposal and borrow sites are not commercial operations and consequently have not been surveyed for cultural resources, please conduct such surveys and provide the personnel qualifications, survey methods, and findings to staff.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Geology

Author: Dr. Patrick Pilling, P.E., G.E.

BACKGROUND

The site is underlain by fine grain and clay soils which exhibit high plasticity indices, high in situ moisture contents, and high percentages of fines (i.e., percent passing a U.S. No. 200 sieve). Soils which exhibit such properties can be moderately to severely corrosive to buried steel and concrete.

DATA REQUEST

77. Please provide a discussion and/or evaluation of the site soils' potential to corrode buried steel and concrete.

BACKGROUND

Access to the site will require the construction of a new bridge structure at Teresa Creek. Depending on the design flows in the creek and the foundation system upon which the bridge structure will be supported, scour at the base of the foundations could affect the performance of the structure foundations.

DATA REQUEST

78. Please provide a discussion and/or evaluation of the potential for design flows in Teresa Creek to scour foundation soils.

BACKGROUND

Figure 8.15-5 presents information developed by the California Division of Mines and Geology (CDMG, 1999) regarding peak accelerations with a 10 percent probability of exceedance in 50 years. The peak accelerations referred to by this map are associated with the interface between Soil Profile Type B (Rock) and Type C (Very Dense Soil and Soft Rock) soils, or at the bedrock/soil interface. The information does not necessarily represent a Design Basis Ground Motion (DBGM) as required by Section 1632.2 of the CBC.

DATA REQUEST

79. Please provide the DBGM for this site. This information can be represented by a response spectrum developed in accordance with Section 1632.2 of the CBC.

BACKGROUND

Section 8.15.1.4.5, Mass Wasting and Slope Stability, of the AFC states that the potential for slope instability is negligible. Section 8.15.2.1, Construction, states that slopes as steep as 2H:1V (horizontal:vertical) will be constructed as a part of this project. As the foundation soils consist of highly plastic clay, the construction of such slopes could induce instability.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

80. Please provide a discussion of the methods and/or calculations which were used to assess slope stability at this site.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Land Use

Author: Mark R. Hamblin

BACKGROUND

For the project to be consistent with the Colusa County General Plan and Zoning Ordinance the project requires the County of Colusa's approvals on five individual land use entitlements.

The proposed project requires the approval of a parcel map to create a 100-acre parcel from an existing 451-acre property (the creation of the power plant property). The project requires the approval of a General Plan amendment and a zone amendment on the proposed 100-acre parcel changing the existing General Plan land use designation from Agricultural General (AG) to Industrial (I), and to change the zone district designation from Exclusive Agriculture (EA) to Industrial (M).

County Zone Ordinance section 4.12.B.10 states that "Energy production plants" require approval of a Use Permit to operate within an Industrial (M) Zone district. Ordinance section 4.12.C states that the maximum building height permitted within the M Zone is 50 feet. Therefore, the proposed project requires Colusa County's advisory approval of a use permit and a height variance.

In November 2006, the applicant submitted an application request for the identified land use entitlements to the Colusa County Department of Planning and Building. The application was determined by the Department of Planning and Building to be incomplete for processing in December 2006.

DATA REQUEST

81. Please provide a copy of the County of Colusa approved tentative parcel map, or preferably the filed Final Map with the County of Colusa, if available, as evidence demonstrating compliance with the Subdivision Map Act (*Note - a copy of the signed and date stamped Final Map recorded in the Colusa County Recorder's Office will be required to be provided to the Energy Commission prior to the start of commercial operation*).
82. Please provide a copy of the adopted General Plan Amendment and Zone Amendment by the Colusa County Board of Supervisor's for the 100-acre project site.
83. Please provide a copy of the County of Colusa's advisory approval of a Use Permit and Height Variance for the proposed power plant.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Socioeconomics

Author: Shaelyn Strattan

BACKGROUND

As noted in AFC Section 8.8.2.4, approximately 40 percent of the construction workforce, or about 268 workers during peak activities, would be weekly commuters. The Commission staff's experience with power plant construction workers is that many commute on a daily basis from their homes, with some projects having a significant amount of ridesharing. The craft needs are staggered and coincide with the average and peak month pattern for the project labor force. Commute times of more than one hour are not unusual for large projects. Therefore, staff is uncertain about the AFC assumption regarding the percentage of weekly commuters.

DATA REQUEST

84. Please provide the basis for the AFC assumption that 40 percent of the construction workforce would be weekly commuters.
85. If the assumption of a 40 percent commuter workforce is accurate, please estimate the number of worker accommodations needed for the 60 percent of workers staying in the area by type. This should include long-term apartment or house rentals for workers staying in the area for several months, nightly and weekly motel rentals, and RV camping.
86. Please identify potential weekly accommodations, including motels and RV camping areas, by type, for those areas of Colusa, Glenn, Sutter, Butte, and Yolo counties located less than one hour automobile commute time from the project site. (Due to existing road types and conditions, this would generally apply to areas within 30-35 miles of the project site, except those areas immediately adjacent to the I-5 highway corridor.) Provide data regarding vacancy rates, seasonal availability, restrictions on length of stay, and other limiting factors.

BACKGROUND

AFC Section 8.8.2.5.2 indicates that law enforcement in the project area would be provided by the Colusa County Sheriff's Department, with onsite security provided by private security personnel. There is no discussion of primary and secondary (back-up) response times from local agencies.

DATA REQUEST

87. Please discuss the availability of Sheriff's officers in the project vicinity during various shifts. Identify primary and secondary (back-up) response times for the Colusa County Sheriff's Department, California Highway Patrol, and other cooperating agencies at various times during the day, including overnight hours.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

BACKGROUND

AFC Section 8.8.2.5.1 provides a list of local emergency services for the areas surrounding the project site. It appears that Maxwell Rural Station has responsibility for emergency response to the project during both construction and operation. There is, however, no discussion of the availability of paramedic services. Even if Maxwell Rural Station has paramedic capability, the estimated response time of 15-20 minutes, as noted in AFC Section 8.7.5.1, is generally unacceptable unless on-site first-response facilities are also available.

DATA REQUEST

88. Please provide information on paramedic services; estimated emergency-specific response times for paramedic and ambulance; and transport times for both ground and airborne ambulances to local hospitals and trauma centers.
89. Please discuss the availability of trained on-site or on-call Colusa Generating Station support personnel, during both construction and operational phases, to conduct a primary emergency response. Identify any equipment or personnel deficiencies in local fire and emergency response agencies that would be addressed and compensated for with on-site personnel or facilities.

BACKGROUND

The population of Maxwell, California is approximately 1250 people. During peak construction months, the site staff could exceed 650 full-time employees, nearly half the community's permanent population. Although AFC Section 8.8.1.3.4 lists the medical facilities within approximately one hour of the site, there is no discussion regarding actual availability of hospital beds or emergency trauma staffing at Colusa Community Hospital, and no discussion whatsoever regarding the availability of trauma care, emergency staffing, or other medical services at Glenn General Hospital, which is closest to the site, or any other listed medical facility.

DATA REQUEST

90. Please discuss, in detail, the availability of trained trauma care and industrial medicine staff and facilities, including the number of beds normally available, at each of the hospitals designated to provide medical services for the site. Identify any other medical facilities, such as urgent care centers or medical clinics that would provide non-emergency care in the Maxwell and surrounding areas, by location, hours of operation, and type of services available. Indicate if facilities place any restrictions on who may be treated (e.g., does not accept Medicare patients or those without insurance).

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Soil and Water Resources

Author: Richard Latteri

BACKGROUND

The Colusa Generating Station (CGS) proposes to use raw surface water for the proposed plant operational needs which would be provided from the Glenn-Colusa Irrigation District (GCID) via the Tehama-Colusa Canal. Contractually, GCID will provide water to the plant through a transfer agreement with Colusa County. The CGS is proposing to use dry cooling in conjunction with a zero liquid discharge system which will minimize consumptive use of water for CGS operation. Table 3.4-4 of the AFC reports average annual water consumption for the CGS at 126.1 acre-feet per year (AFY).

In the GCID “Will-Serve” Letter (Figure 7.1-1), GCID states: *Based on information presented by your staff and counsel, the Colusa Generating Station will require a maximum annual supply of 400 acre-feet of water per year. GCID believes the most feasible way to serve the project would be to have GCID transfer 400 AF to the County of Colusa for 30 years. The County of Colusa would, in turn, deliver that water to E&L Westcoast’s power plant over a 12-month period for 30 years.* This estimate of water consumption in the “Will-Serve” Letter” is over 3-times the estimated annual water consumption of 126.1 AFY reported in the AFC.

Additionally, the “Will-Serve” Letter” contains numerous conditions that must be met prior to approval of the transfer agreement.

DATA REQUEST

91. a. Please provide a discussion/explanation for the transfer of 400 AFY for CGS operation for a 30-year period, which is far in excess of estimated CGS operational needs.
b. If 400 AFY will be provided over a 30-year period, please provide a discussion of the on-site storage facilities required to store the excess raw water from the Tehama-Colusa Canal
92. Please provide a copy of the U. S. Bureau of Reclamation’s Letter Agreement for the transfer of surface water (up to 400 AFY) from the Glenn-Colusa Canal to the County of Colusa for a 30 year period which includes a provision to renew the contract after 30 years.
93. Please provide a service agreement from the County of Colusa for delivery of water from the Tehama-Colusa Canal for up to 400 AFY for a 30-year period which includes a provision to renew the contract after 30 years.

**COLUSA GENERATING STATION
(06-AFC-09)
DATA REQUESTS**

BACKGROUND

The sanitary wastewater system will collect wastewater from sinks, toilets, and other sanitary facilities for discharge into an on-site septic system. The Porter-Cologne Water Quality Control Act controls discharge of wastewater to surface or groundwater in California, which is administered by the nine Regional Water Quality Control Boards. California Water Code Section 13260 requires a Report of Waste Discharge (RWD) for any discharge that could affect waters of the State to file a report with and receive requirements from the Regional Water Board.

DATA REQUEST

94. Please provide a Report of Waste Discharge which complies with California Water Code Section 13260 and a discussion of the regulatory authority of the Colusa County Department of Environmental Health in reviewing and approval of septic leach fields.

BACKGROUND

To determine the potential impacts to water and soil resources from the construction of the Colusa Generating Station project, the Energy Commission requires a Drainage Erosion and Sediment Control Plan (DESCP). The DESCP will be updated and revised as the project moves from the preliminary to final design phases and is to be a separate document from the Construction SWPPP. The DESCP submitted prior to site mobilization must be designed and sealed by a professional engineer/erosion control specialist.

DATA REQUEST

95. Please provide a draft DESCP containing elements A through I below outlining site management activities and erosion/sediment control BMPs to be implemented during site mobilization, excavation/demolition, construction, and post-construction activities. The level of detail in the draft DESCP should be commensurate with the current level of planning for site grading and drainage. Please provide all conceptual erosion control information for those phases of construction and post-construction that have been developed or provide a statement when such information will be available.
 - A. Vicinity Map** – A map(s) at a minimum scale 1"=100' will be provided indicating the location of all project elements (construction site, laydown area, pipelines, etc.) with depictions of all significant geographic features including swales, storm drains, and sensitive areas.
 - B. Site Delineation** – All areas subject to soil disturbance for the CGS (project site, laydown area, all linear facilities, landscaping areas, and any other project elements) shall be delineated showing boundary lines of all construction/demolition areas and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.

**COLUSA GENERATING STATION
(06-AFC-09)
DATA REQUESTS**

- C. Watercourses and Critical Areas** – The DESCPC shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the CGS construction, laydown, and landscape areas and all transmission and pipeline construction corridors.
- D. Drainage Map** – The DESCPC shall provide a topographic site map(s) at a minimum scale 1"=100' showing all existing, interim and proposed drainage systems and drainage area boundaries. On the map, spot elevations are required where relatively flat conditions exist. The spot elevations and contours shall be extended off-site for a minimum distance of 100 feet in flat terrain.
- E. Drainage of Project Site Narrative** – The DESCPC shall include a narrative of the drainage measures to be taken to protect the site and downstream facilities. The narrative should include the summary pages from the hydraulic analysis prepared by a professional engineer/erosion control specialist. The narrative shall state the watershed size(s) in acres that was used in the calculation of drainage measures. The hydraulic analysis should be used to support the selection of BMPs and structural controls to divert off-site and on-site drainage around or through the CGS construction and laydown areas.
- F. Clearing and Grading Plans** – The DESCPC shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections or other means. The locations of any disposal areas, fills, or other special features will also be shown. Illustrate existing and proposed topography tying in proposed contours with existing topography.
- G. Clearing and Grading Narrative** – The DESCPC shall include a table with the quantities of material excavated or filled for the site and all project elements of the CGS project (project site, lay down area, transmission corridors, and pipeline corridors) whether such excavations or fill is temporary or permanent, and the amount of such material to be imported or exported.
- H. Best Management Practices Plan** – The DESCPC shall identify on the topographic site map(s) the location of the site specific BMPs to be employed during each phase of construction (initial grading/demolition, project element excavation and construction, and final grading/stabilization). BMPs shall include measures designed to prevent wind and water erosion.

**COLUSA GENERATING STATION
(06-AFC-09)
DATA REQUESTS**

- I. **Best Management Practices Narrative** – The DESCPC shall show the location (as identified in H above), timing, and maintenance schedule of all erosion and sediment control BMPs to be used prior to initial grading, during all project element (site, pipelines, etc.) excavations and construction, final grading/stabilization, and post-construction. Separate BMP implementation schedules shall be provided for each project element for each phase of construction. The maintenance schedule should include post-construction maintenance of structural control BMPs, or a statement provided when such information will be available.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Traffic and Transportation

Author: David Flores

BACKGROUND

The applicant indicates that the project will require offsite roadway improvements, which includes replacement of the Teresa Creek Bridge and the Glenn-Colusa Canal Bridge. The AFC provides minimal information on the need for securing necessary roadway easements beyond the County's right-of-way for the temporary roadway access routes. In addition, laydown areas for equipment and materials during construction of these bridge replacements will be necessary.

DATA REQUEST

96. Please clarify the easement requirements for the offsite bridge replacement/improvements and include in your discussion, the following items:
- Discuss what agreements have been secured or are currently being negotiated with the owners of the adjacent parcels or whether a new or expanded easement is required.
 - Please discuss the location of the laydown area for equipment and materials.
 - Discuss whether the temporary roadway will meet the fire district's requirement as an all weather roadway.

BACKGROUND

On AFC page 8.10-7 of the AFC, the Goods and Movement section states "both I-5 and the railroad spur west of the project site have adequate capacity to accommodate delivery of goods and equipment to the project."

DATA REQUEST

97. To determine the effects and impact that the transportation of heavy equipment will have on the local and state roadways and traffic flow, please provide the following information:
- Please provide the location of the rail depot or other goods transfer facility that the project expects to use in the transition from rail to roadway.
 - The roadways to be used from the depot to transport the equipment to the facility.
 - The monthly schedule for the delivery of heavy equipment.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Transmission System Engineering

Author: Ajoy Guha, PE, Sudath Arachchige and Mark Hesters

INTRODUCTION

Staff needs to determine the system reliability impacts of the project interconnection and to identify the interconnection facilities including downstream facilities needed to support the reliable interconnection of the proposed Colusa Generating Station (CGS). The interconnection must comply with the Utility Reliability and Planning Criteria, North American Electric Reliability Council (NERC) Planning Standards, NERC/Western Electricity Coordinating Council (WECC) Planning Standards, and California Independent System Operator (CA ISO) Planning Standards. In addition the California Environmental Quality Act (CEQA) requires the identification and description of the "Direct and indirect significant effects of the project on the environment."

For the compliance with planning and reliability standards and the identification of indirect or downstream transmission impacts, staff relies on the System Impact Study (SIS) and Facilities Study (FS) as well as review of these studies by the agencies responsible for insuring the interconnecting grid meets reliability standards, in this case, the PG&E and CA ISO. 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 the transmission to violate reliability requirements the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include modification and construction of downstream transmission facilities. The CEQA requires environmental analysis of any downstream facilities for potential indirect impacts of the proposed project.

BACKGROUND

The description of the CGS switchyard and interconnection facilities between generators and switchyard including major equipment and their ratings are incomplete as provided in the AFC (AFC, section 3.4.4, Page 3-6, Figures 3.4-6 & 3.4-8).

DATA REQUEST

98. Provide a complete electrical one-line diagram (or resubmit Figures 3.4-6 and 3.4-8) of the CGS switchyard showing all equipment for generators' interconnection with the switchyard including any bus duct connectors or cables, 18 kV breakers on the low side, generator step-up transformers, short overhead line or conductors with its configuration, buses, breakers, disconnect switches on the 230 kV side and their respective ratings.
99. Provide a physical layout drawing of the CGS switchyard showing major equipment and transmission line outlets.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

BACKGROUND

To offset overloads on the existing Palermo substation 230/115 kV transformer, the November 2006 SIS performed by Navigant Consulting, identifies mitigation as the PG&E project no.T686B for installation of a second 230/115 kV transformer at the Palermo substation by 2007 (SIS Section 12.1.1, Page 21). To mitigate identified overloads on the Palermo-East Marysville 115 kV line, the SIS (Section 12.1.2, pages 22) indicates the PG&E project no. T686 for reconductoring the Palermo-Bogue and Palermo-East Nicolaus 115 kV lines by 2007. However, the SIS report also indicates that the aforesaid PG&E projects have not yet been approved by PG&E management. To complete its analysis staff needs confirmation that these mitigation options will be funded and implemented.

To eliminate identified overloads on Western's Olinda Substation 500/230 kV transformer, the SIS (Section 12.4.1, pages 25) indicates installing a second 500/230 kV transformer or developing a remedial action scheme (RAS) to drop CGS generation as alternate mitigation options. No specific selection of the mitigation measure has been made. Staff needs this information for completing its analysis.

DATA REQUEST

100. For the identified mitigation PG&E project no.T686B (installation of a second 230/115 kV transformer at the Palermo substation) to eliminate overload on the existing 230/115 kV transformer, provide a report or letter from PG&E indicating whether or not the project has approval from PG&E management and the CA ISO, and any change in the expected on-line date.
101. For the identified mitigation by PG&E project no. T686 (reconductoring of the Palermo-Bouge and Palermo-East Nicolaus 115 kV lines) needed to eliminate overloads on the Palermo-East Marysville 115 kV line, provide a report or letter from PG&E indicating whether or not the project has the approvals from PG&E management as well as the CA ISO, and any change in the expected on-line date.
102. To eliminate overloads on the existing Olinda Substation 500/230 kV transformer, select and describe the identified mitigation measure and provide the expected on-line date. Provide a report or letter from PG&E and the owner of the Olinda substation indicating whether or not the selected mitigation has approval from PG&E, the CA ISO and the owner of the Olinda substation.
103. In respect of the submitted SIS, provide electronic copies of *.sav, *.drw, *.dyd and *.swt GE PSLF files and EPCL contingency files in a CD (if available).

BACKGROUND

The AFC (Section 5.5, Pages 5-3 to 5-6) indicates that several mitigation measures have been selected to eliminate identified overloads on some non-PG&E transmission facilities. Since these measures include modification and construction of downstream facilities, the applicant needs to comply with the CEQA requirements for environmental

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

analysis of the potential indirect impacts of the proposed project. The facilities and proposed mitigation are:

- Western Area Power Administration (Western) reconductoring its Shasta-Flanigan-Keswick 8.75 -mile 230 kV line; and
- Joint building of a new 26-mile O'Banion-Elverta and Natomas double circuit 230 kV line by Western, Sacramento Municipal Utility District (SMUD) and the City of Roseville; and
- Expanding Western's Folsom 230 kV substation and looping in SMUD's existing Orangeville-Lake 230 kV line via two tie lines.

DATA REQUEST

104. a. For the identified mitigation by reconductoring the Western Shasta-Flanigan-Keswick 8.75 -mile 230 kV line, provide a full description of the project with one line diagrams showing pre-project and post-project line routes and indicate the expected on-line date.
- b. For the environmental settings and impacts, provide a general environmental analysis and any recommended mitigation measures sufficient to meet CEQA requirements for indirect project impacts. **Alternatively**, should the environmental impact analysis be scheduled to be performed by Western as indicated in the AFC, then provide their analysis report.
105. a. For the identified mitigation of building a new 26-mile O'Banion-Elverta and Natomas double circuit 230 kV line jointly by Western, SMUD and the City of Roseville, indicate the expected on-line date.
- b. provide a general environmental analysis sufficient to meet the CEQA requirement for indirect impacts or draft supplemental Environmental Impact Statement (EIS) and Environmental Impact Report (EIR).
106. a. For the identified mitigation for expanding Western's Folsom 230 kV substation and looping in SMUD's existing Orangeville-Lake 230 kV line via two tie lines, provide a full description of the project with necessary diagrams showing pre-project and post-project facilities & line routes and indicate the expected on-line date.
- b. For the environmental settings and impacts, provide a general environmental analysis and any recommended mitigation measures sufficient to meet CEQA requirements for indirect project impacts. **Alternatively**, should the environmental impact analysis is scheduled to be performed by SMUD and/or Western as indicated in the AFC, then provide their analysis report.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

107. For the above selected downstream mitigation measures comprising new or modified transmission facilities, forward reports or letters from the respective transmission owners including PG&E, Western, SMUD and City of Roseville showing that the mitigation measure(s) selected in their system will effectively offset overload violations and be implemented on a timely basis before the on-line date of the CGC.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Visual Resources - Plume

Author: William Walters

DUCT FIRING ASSUMPTIONS

BACKGROUND

The applicant's plume analysis is based on 100% duct firing during the November to April seasonal period daylight hours. Staff believes that basis to be overly conservative and wishes to determine a more reasonable worst-case duct firing operation based on both normal load demand patterns and the applicant's air quality duct firing assumptions/hourly limits. The assumption regarding what hours of the day duct firing occurs is critical to the visible plume analysis for this project due to the large size of the duct burner that both decreases exhaust temperature and increases exhaust moisture content, creating conditions much more conducive to visual plume formation than occur during non-duct fired base load operation. Staff needs additional information to determine the proper facility operating conditions for the plume modeling analysis.

DATA REQUEST

108. Please confirm that the applicant will continue to seek air pollutant limits based on 1040 hours of duct firing for every quarter, and will not seek to change those limits to reflect normal load demand.
109. Please provide representative hourly load demand data for the PG&E and/or other load demand sources relevant to the project for no less than one full year.

METEOROLOGICAL DATA

BACKGROUND

The plume analysis information provided by the applicant does not provide a complete description of the meteorological file used by the applicant. By comparing the air quality modeling files it appears that certain Maxwell surface data parameters were likely used; however, staff needs confirmation of which parameters are from Maxwell and which parameters are from other monitoring sites. The applicant notes in the air quality section (AFC p. 8.1-8 and 8.1-9) that cloud cover data from Red Bluff was used, so staff assumes that this is also the case for the applicant's CSVP modeling analysis. However, the information provided makes no mention of how the other meteorological data necessary for the completion of the plume analysis were obtained. Staff needs additional information and data to analyze appropriateness issues for the meteorological data used by the applicant and to determine if other single source meteorological data available from other Sacramento Valley monitoring stations should be used in place of that used by the applicant.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

DATA REQUEST

110. Please identify the monitoring source of the following meteorological data parameters used in the applicant's CSVP modeling analysis:
- A. Temperature
 - B. Wind speed
 - C. Wind direction
 - D. Relative humidity
 - E. Present weather
 - F. Visible range
 - G. Cloud Cover

STACK EXHAUST DATA

BACKGROUND

The gas turbine/heat recovery steam generator (HRSG) exhaust conditions for duct firing include a large jump in exhaust temperature between the 59 degree Fahrenheit and 114 degree Fahrenheit ambient conditions. This exhaust temperature jump does not occur during non-duct firing conditions, and staff believes that this may be a function of dry cooling design capacity limitation. Staff needs additional information to understand how the exhaust temperature changes with ambient temperature when duct firing between 59 and 114 degrees Fahrenheit in order to complete the plume modeling analysis.

DATA REQUEST

111. Please describe why the gas turbine/HRSG exhaust temperature changes significantly between the duct firing cases at 59 and 114 degrees Fahrenheit.
112. Please identify at what ambient temperature the gas turbine/HRSG exhaust temperature, during full duct firing, starts to rise at a greater rate and provide an assumption for the slope of exhaust temperature change from this temperature, whether it is 59 degrees Fahrenheit or not, to 114 degrees Fahrenheit. Alternatively, a chart providing exhaust temperature during duct firing vs. integer values of temperature in Fahrenheit would be acceptable.

**COLUSA GENERATING STATION
(06-AFC-9)
DATA REQUESTS**

Technical Area: Worker Safety and Fire Protection

Author: Rick Tyler

BACKGROUND

AFC Sections 8.7, 8.7.5.1 and 8.7.5.2 provide discussion on fire suppression and prevention practices and services, along with emergency services. The application identifies the Maxwell Fire Protection District (MFPD) station as having the primary responsibility for fire and emergency off-site response to the project during both construction and operation. The MFPD is staffed entirely by volunteers. In an email to the Energy Commission's CGS project manager, dated 12/6/06, the MFPD expressed concern over its lack of funds and ability to provide adequate response to fires, hazardous materials releases or other emergencies during construction and operation of the Colusa Generating Station (CGS). Additionally, the MFPD expressed concern with the lack funding and training for its volunteer staff and its ability to conduct a safe, timely, and complete response to a fire or other emergency at this type of industrial facility.

DATA REQUEST

113. Please provide information on paramedic services; estimated emergency-specific response times and transport times, for both ground and airborne ambulances to local hospitals and trauma centers.
114. Provide information on how the proposed project might resolve the concerns expressed by the MFPD to reduce the impacts to the district to less than significant as a direct result of the development of the CGS.
115. Please discuss mitigate measures that could resolve the safety and education issues raised by the MFPD for the department volunteers and any other local fire personnel for the construction phase, as well as the operation of the CGS.
116. Given the volunteer status of the MFPD, please discuss the CGS project plans, if any, for an on-site fire/emergency response team and related operational staff training programs.

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

APPLICATION FOR CERTIFICATION
FOR THE *COLUSA GENERATING
STATION PROJECT*

Docket No. 06-AFC-9
PROOF OF SERVICE

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-9
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DECLARATION OF SERVICE

I, Angela Hockaday, declare that on January 12, 2007, I deposited copies of the attached Data Request 1 through 116 for the Colusa Generating Station (06-AFC-9), in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of 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.

Original signed in Dockets

[signature]