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October 14, 2009

Turlock Irrigation District
Randy Baysinger,
Assistant General Manager
Power Supply
333 East Canal Drive
Turlock, CA 95381-0940
rcbaysinger@tid.org

Re: TID Almond 2 Power Plant Project (09-AFC-2) CURE Data Requests, Set One (Nos. 1 - 106)

Dear Mr. Baysinger:

California Unions for Reliable Energy (CURE) submits this first set of data requests on Air Quality, Transmission, Soil Contamination, Biological Resources, Cumulative Impacts and Traffic to Turlock Irrigation District for the Almond 2 Power Project, pursuant to Title 20, section 1716(b), of the California Code of Regulations. The requested information is necessary to: (1) more fully understand the project; (2) assess whether the project will be constructed and operated in compliance with all laws, ordinances, regulations and standards; (3) assess whether the project will result in significant environmental impacts; and (4) assess potential mitigation measures.

CURE reserves the right to submit additional data requests on any topic that requires further information. Pursuant to section 1716(f) of the Energy Commission's regulations, written responses to these requests are due within 30 days. If you are unable to provide or object to providing the requested information by the due date, you must send a written notice of your objection(s) and/or inability to respond, together with a statement of reasons, to Commissioners Julia Levin and Karen Douglas and to CURE within 20 days.

Please contact us if you have any questions. Thank you for your cooperation with these requests.

Sincerely,

/s/

Loulena A. Miles

LAM:bh

AIR QUALITY

Background: Greenhouse Gas Impacts

The Almond 2 Power Project (A2PP) would emit greenhouse gases (GHG) during operation from the turbines and switchyard breakers and from combustion exhaust emissions during construction. The AFC quantifies annual operational greenhouse gas emissions, explains that the Project will provide firming sources for Turlock Irrigation District's (TID) existing and future intermittent renewable resources in support of TID's Renewable Portfolio Standards (RPS) and GHG goals, and concludes that the Project "should not result in a net increase in global GHG emissions because it would operate to replace energy from existing, less efficient peaking power sources in the service territory." In order to qualitatively and quantitatively analyze the additional greenhouse gas emissions of A2PP in the context of the TID service territory, additional general information is needed regarding the emissions and operations of the TID service territory.

Data Request

1. Please provide the following data regarding GHG emissions after A2PP begins commercial operation:

    a. The annual expected GHG emissions from A2PP.

    b. The change in GHG emissions from TID-dispatched facilities due to the addition of A2PP to the TID system.

    c. The change in GHG emissions from non-TID generators (if any) due to the addition of A2PP to the TID system.

    d. Please explain how TID dispatches its system (e.g., cost-minimization, emissions minimization, fuel-use minimization, other) and how TID decides between operation of TID-controlled facilities and purchases from non-TID sources.

    e. Please provide the expected quantity (in gwh/year) of annual purchases and sales of energy by TID from non-TID sources, with and without A2PP.

Background: EMISSIONS OFFSETS FOR NOx AND VOCs

San Joaquin Valley Air Pollution Control District Rule 2201 requires the project to provide emissions offsets when emissions exceed specified levels on a pollutant-specific basis. A2PP will require valid offsets for particulate matter with

aerodynamic diameter less than or equal to 10 microns (PM10), Nitrogen Oxide (NOx), and volatile organic compounds (VOC).[1] The credits offered by TID to offset NOx emissions were generated in 1990, 200 miles away in Tupman, California, from the retrofit of 31 engines. The credits offered by TID to offset SOx were generated in Bakersfield, California, also 200 miles to the South, from the reduction in refinery fuel gas H2S content prior to combustion. The credits offered by TID to offset VOCs were generated in 1992, 100 miles to the South in Fresno, California.

Data Requests

2. Please provide the status of the air basin (attainment or nonattainment for NOx and VOC) at the time that the NOx, and VOC ERCs were generated.

3. Please explain how offsets that were generated up to 200 miles away from the Project site and/or are nearly 20 years old can be used to mitigate impacts for the A2PP.

Background: AMMONIA SLIP

The Project proposes a 10 ppm ammonia slip limit. A 5 ppm ammonia slip level is technologically and economically feasible and is recommended in the CARB's Guidance for Power Plant Siting and Best Available Control Technology.[2]

Data Request

4. Please explain why the project's proposed ammonia slip emissions limit does not comply with the CARBs Guidance for Power Plant Siting.

[1] AFC Table 5.1-35.
[2] CARB's Guidance for Power Plant Siting and Best Available Control Technology, p. 7, Approved July 22, 1999. Accessed at http://www.arb.ca.gov/energy/powerpl/guidocfi.pdf on October 11, 2009.

Background: OPERATING RESERVES

In the AFC, TID indicates that one purpose of A2PP is to provide operating reserves.[3] In TID's September 14, 2009 data response, set 1A, TID indicates that A2PP will be preferable to both the existing TID combined cycle plant and "less efficient peaking capacity," as a source of spinning reserves.[4] If A2PP were not preferable to existing resources (TID combined cycle and "less efficient peaking capacity"), then it would not usefully serve the project purpose of providing operating reserves. In order to analyze whether A2PP will serve that purpose better than already built resources, additional information is needed regarding the spinning reserves provided by A2PP and TID's hourly need for spinning reserves, which can then be compared to data on the expected operation of A2PP to evaluate how much of the planned operation of A2PP will provide spinning reserve benefits.

Data Request

5. What is the maximum number of Mw of spinning reserves that each of the three proposed units of A2PP could provide?[5]

    a. Please identify the basis used by TID to identify its spinning reserve requirements in order to comply with applicable reliability requirements (e.g., % of thermal generation plus 5% of hydro generation, or, largest single generator).

    b. Please provide, in Excel format if possible, for each hour of calendar 2008, in Mw:

        i. TID's load plus losses.

        ii. TID's hydro generation.

        iii. TID's generation from TID-dispatched "less efficient peaking capacity."

        iv. TID's generation from the Walnut Energy Center.

[3] AFC p. 1-1.
[4] TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 18 of 758 in the PDF file.
[5] CURE believes it is either 33 Mw, consisting of a 58 Mw total capacity minus a 25 Mw minimum generation requirement, or else 17 Mw, consisting of a 58 Mw total capacity times 30 percent. See AFC p. 6-28.

v. Other TID-owned generation.

vi. Purchased generation.

vii. Any component of TID's load plus losses (subpart (i) not identified in the responses to subparts (ii) through (vi).

viii. Spinning reserve available from TID's hydro generation.

ix. Spinning reserve available from TID's Walnut Energy Center.

x. Spinning reserve available from TID's "less efficient peaking capacity."

xi. Spinning reserve (if any) available from purchases.

xii. TID's spinning reserve requirement to comply with applicable reliability requirements.

c. Please identify and describe in detail any reserve-sharing or emergency support agreements TID has with any other utilities or balancing areas, including but not limited to SMUD and the CAISO.

Background: A2PP ANNUAL OPERATION ESTIMATES

In TID's data responses to staff data requests, TID asserts that construction of A2PP prior to 2008 would have allowed Walnut Energy Center generation to be optimized in 2008, while requiring only 8550 Mwh of generation at A2PP.[6] TID also indicates that the existing Almond power plant (hereinafter referred to as Almond 1) ran 2846 hours (32.5% of all hours) in 2007, and 2354 hours (26.8% of all hours) in 2008.[7] This data suggests that A2PP will need to run far fewer hours than Almond 1 has been operating, despite being a more efficient powerplant. If so, then either (1) there is a factual discrepancy, since normally less efficient powerplants run less than more efficient ones, or (2) TID is, perhaps unnecessarily, seeking a permit to operate A2PP in many hours when it is not needed to provide reserves, with resultant air quality impacts that could be avoided, or (3) some other reason exists that TID has not explained that will cause the more efficient A2PP to operate less than its adjoining less efficient neighbor Almond 1. To distinguish among these possibilities, additional information is needed regarding the planned and/or historical operation of Almond 1 and A2PP.

[6] TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 92 of 758 in the PDF file.
[7] *Id*. at p. 30 of 758.

Data Requests

6. Please confirm that 8550 gwh/year corresponds to an annual capacity factor for the A2PP powerplant of about 0.56%, or about one half of one percent.

7. Please provide the annual capacity factors for the Almond 1 plant in 2007 and 2008 which resulted from operating in 1/4 to 1/3 of all the hours in those years.

8. Please confirm that the A2PP powerplant will be more efficient and thus earlier in the TID loading order, than the Almond 1 powerplant.

9. Please confirm that, based on your response to the previous question, TID would expect A2PP to run more than Almond 1.

10. To quantify your response to the previous question, please provide your best estimate of (i) how many hours A2PP would have run in each of the years 2007 and 2008 if it had been in service in those years, and (ii) the A2P capacity factor in each of the years 2007 and 2008 if it had been in service in those years.

11. Does TID consider A2PP to be planned as a "peaking" powerplant, a "baseload" powerplant, or something else (please specify)?

12. Please provide your definition of the range of annual capacity factors associated with "peaking" and "baseload" powerplants, as those terms are used by TID, as well as the range of annual capacity factors associated with plants of the same type as A2PP (if your answer to the previous subpart was anything other than "peaking" or "baseload").

13. Please indicate whether TID expects Almond 1 to run fewer hours and/or at a lower capacity factor than A2PP once both are in service.

14. To quantify your response to the previous question, please provide your best estimate, for the first year that Almond 1 and A2PP will both be in service, of their respective number of operating hours and capacity factors.

15. If any of your answers to the preceding questions have suggested that Almond 1 would operate more than A2PP, please explain in detail why that would occur.

Background: A2PP PURPOSE AND NEED

In the AFC, TID states that two purposes of the A2PP project are to provide firming sources for TID's intermittent renewable resources and to provide generation to meet TID's growing loads.[8] To analyze how A2PP will contribute to these goals, more information is needed regarding the firming capacity that A2PP would provide, the level of renewable resources that might need firming capacity provided, and TID's overall need for firm capacity (if TID has adequate overall firm resources, the fact that some of its renewable resources are not firm would not matter).

Data Requests

16. How many Mw of firm capacity will the A2PP project provide towards meeting these goals?

17. Please identify, for each year from 2010 through 2020, in Mw, for each renewable energy project TID intends to have in service that year:

    a. The installed capacity of the project.

    b. The firm capacity that TID believes it can count on from that project at the time of TID's peak demand.

    c. If available, the firm capacity of the project as it would be calculated using the CAISO's methodology for determining NQC, or (net qualifying capacity), for Resource Adequacy purposes.

18. Please describe how TID determines the firm capacity for reliability purposes that is associated with renewable energy projects.

19. Please identify any differences between TID's methodology for determining the countable firm capacity from renewable energy projects and the CAISO's NQC methodology.

20. Please provide any loads and resources data or loads and resource balance for TID which already exists which TID believes shows how A2PP (or a comparable source of 174 Mw of firm capacity) would help to firm TID's intermittent resources and meet load growth. Relevant loads and resources data which should be provided, if available, include the following items (from 2010-2020, in Mw) plus any others TID considers relevant to demonstrating how A2PP would help to firm TID's intermittent resources and meet load growth:

[8] AFC p. 6-2.

a. TID's annual peak demand under 1-in-10 weather conditions.

b. Losses associated with the peak demand given in response to the previous subpart, if not already included.

c. Reserve requirements associated with the peak loads identified in subparts (a) and (b).

d. Mw of TID-controlled hydro resources available to meet peak loads.

e. Each TID-controlled thermal project (e.g., Almond 1, A2PP, Walnut Energy Center) available to meet peak loads.

f. Firm capacity from renewable projects available to TID to meet peak loads (this number should equal the total of the individual project firm capacities given in response to Data Request 17(b)).

g. Firm capacity from load management or other demand-side measures available to TID.

h. Firm imports available to TID from non-TID sources.

i. Firm reserves available to TID from non-TID sources.

j. Firm export obligations (if any) of TID.

k. Other loads and resources not included in the above subparts.

l. The net surplus or deficit of capacity at the time of one-in-ten-year system peak demand (which should equal the sum of the loads and resources given in response to the preceding subparts of this question).

Background: MAINTENANCE OF INTERCONNECTION SCHEDULE

In the AFC, TID says that one of the purposes of the proposed A2PP project is to "help maintain TID's Balancing Authority tie line (interconnection) schedules with" the CAISO and SMUD.[9] To analyze whether this purpose is distinct from other TID system requirements (such as regulation), to analyze whether this purpose is already met by existing TID resources, and to quantify the degree to which A2PP would meet this purpose, additional data is required, as requested below.

[9] AFC p. 6-2.

Data Requests

21. Please indicate how the generation needed to serve this purpose differs (if it does) from the generation needed to provide what is usually called "regulation."

22. For each hour of the year 2008, please indicate the hourly Mw of changes in generation schedules that TID needed to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

23. For the year 2008, please indicate the maximum hourly Mw of changes in generation schedules that TID needed to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

24. For each hour of the year 2008, please indicate the hourly Mw of hydro generation available to TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

25. For each hour of the year 2008, please indicate the hourly Mw of thermal generation available to TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

26. For each hour of the year 2008, please indicate the hourly Mw of hydro generation used by TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

27. For each hour of the year 2008, please indicate the hourly Mw of thermal generation used by TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

28. If the A2PP project is not built, how will TID "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO?

29. Please explain in detail how A2PP would be used to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO, including a quantitative measure of how many Mw and/or Mw/minute of A2PP output would be available for this purpose.

Background: HUGHSON-GRAYSON PROJECT

According to the Hughson-Grayson Project DEIR, the new Grayson substation will have a single 115 kV line to the Hughson substation and a single 167 MVA 115/69 kV transformer, and will have three 69 kV lines – one each to

Westport, Gilstrap, and the Almond 1 powerplant.[10] However, according to the AFC, there will be a second 115 kV line (besides the double-circuit 115 kV line from the A2PP powerplant) leaving the Grayson substation, going to "Tayor" (sic).[11]

Because delivery of A2PP generation to the grid is dependent upon the completion of the not-yet-under-construction Hughson-Grayson project, the CEC needs to have a full understanding of the Hughson-Grayson project and the extent to which it will provide needed interconnection services for the A2PP project. Additional information is needed to (1) quantify the intended scope of the Hughson-Grayson project, to (2) quantify whether that scope will be sufficient to deliver A2PP generation under contingency conditions, and to (3) quantify whether the Hughson-Grayson project, by relieving operational stresses on TID's 69 kV system, will allow the existing Almond 1 project to operate less as a must-run generator for local 69 kV reliability and more as a source of spinning reserves, thus reducing the need for and value of A2PP as a source of spinning reserves.

Data Requests

30. Please reconcile this difference, indicating where the environmental impacts of the Grayson-Tayor (sic) line (if it is going to be built) are being analyzed.

31. Please explain how, if the DEIR is correct, it will be possible to deliver 174 Mw from A2PP if the Grayson-Hughson line is out of service, given the 115/69 kV transformer rating of 167 MVA.

32. Please provide the source of the information which led CH2MHill (the author of AFC Figure 3.1-3B) to believe a Grayson-Tayor (sic) 115 kV line is planned.

33. Please provide the planned rating of the planned Grayson-Westport and Greyson-Gilstrap 69 kV lines (no rating appears to be given for these lines in the DEIR).

34. Please provide documentation that an outage of the Grayson-Hughson 115 kV line would not lead to an overload of the Grayson-Westport and/or Grayson-Gilstrap 69 kV lines if the Almond powerplants were both operating at full power, due to generation from both A2PP (via the proposed Almond-Grayson double-circuit 115 kV lines) and Almond 1

[10] August 2009 Hughson-Grayson Draft Environmental Impact Report, pp. 3-7, 3-8 and 3-9; Figure 3.2. Downloadable from http://www.tid.org/Power/CurrentProjects/Hughson-GraysonProject/index.htm.
[11] AFC Figure 3.1-3B.

(via the proposed Almond-Grayson 69 kV line) having to exist the Grayson substation over those lines.

35. Please provide the rating of the proposed Grayson-Hughson 115 kV line.

36. Please indicate whether the proposed Grayson-Hughson 115 kV line would be able to deliver the full output of the A2PP powerplant during an outage of the proposed Grayson 115/69 kV transformer.

37. Please provide any powerflow or other existing studies which form the basis for your responses to the preceding subparts of this question.

Background: NEED FOR GRAYSON SUBSTATION

The AFC asserts that the Grayson substation project is an independent action that would be pursued whether or not the A2PP is built. It is unclear what TID's basis is for needing the Grayson substation in the absence of A2PP, as well as how the various components of the Grayson substation would be used in the absence of the A2PP project.

Data Requests

38. Please confirm that, even if the A2PP AFC is denied, TID intends to proceed with construction of the Grayson substation and the associated 69 and 115 kV transmission lines as described in the August 2009 DEIR.

39. Please provide the underlying studies which indicate a need for the Grayson substation for reasons unrelated to the proposed A2PP powerplant.

40. Please indicate the maximum Mw of load proposed to be served in the first year after construction completion (via 12 kV feeders) from the Grayson substation, and indicate how this load will be served prior to operation of the Grayson substation.

41. Please indicate the maximum loading (in both percentage and MVA) expected on the TID 69 kV system west of Highway 99 prior to and after operation of the Grayson substation.

42. Assuming no A2PP project in service, what would the maximum expected loadings be on each of the following Grayson substation components, in MVA and as a percentage of rated capacity (normal or emergency rating, as appropriate):

a. 115 kV Grayson-Hughson line under N-0 conditions.

b. 115 kV Grayson-Hughson line with the Grayson 115/69 kV transformer out of service.

c. Grayson 115/69 kV transformer under N-0 conditions.

d. Grayson 115/69 kV transformer with the Grayson-Hughson 115 kV line out of service.

e. Grayson-Westport 69 kV line under N-0 conditions.

f. Grayson-Westport 69 kV line under N-1 conditions.

g. Grayson-Gilstrap 69 kV line under N-0 conditions.

h. Grayson-Gilstrap 69 kV line under N-1 conditions.

i. Please provide any powerflow or other studies which form the basis for your responses to the preceding subparts of this question.

j. If TID asserts that there are no data or studies available of the TID system with the Grayson substation in service but A2PP not operating, please explain:

    i. how TID can evaluate the Hughson Grayson Project or the A2PP project independently if they have never been studied or analyzed in the absence of the other project.

    ii. How TID can be sure that the Grayson substation and interconnected lines will not be subject to overloads in the future, even if A2PP is built, if outages occur at a time when the A2PP generator is not running.

k. Are there any transmission contingencies on the TID system for which the proposed solution is to turn on the A2PP generator (if the contingency occurs while A2PP is offline), or to turn off the A2PP generator (if the contingency occurs while A2PP is operating)? If so, please identify them.

Background: RECONDUCTORING OF ALMOND-CROWS LANDING LINE

The AFC indicates that the existing Almond-Crows Landing 69 kV line will be reconductored as part of the A2PP project.[12] Further information is needed as to the scope of the proposed reconductoring, and what contingency that does not currently exisit the reconductoring is intended to address.

Data Requests:

43. Please provide the MVA rating for the existing line.

44. Please provide the MVA rating for the proposed reconductored line.

45. Please provide an explanation of why the A2PP project, which will be interconnected at the 115 kV level to the south (A2PP-Grayson lines), will cause increased flows on a 69 kV line to the north (Almond 1-Crows Landing line).

46. Please provide any power flow diagrams or other analyses done prior to the AFC filing showing overloads on the Almond 1-Crows Landing 69 kV line with A2PP in operation.

Background: SYSTEM IMPACT STUDY

The AFC indicates that a System Impact Study (SIS) is being prepared by the consultant USE.[13] To examine the nature of the relationship between TID as interconnection applicant, TID as interconnection request reviewer, and USE as technical expert, additional information is needed.

Data Requests:

47. Please provide copies of any prior interconnection studies done by USE for TID.

48. Is TID both the Applicant for A2PP and the regulatory authority reviewing the SIS? If so, how is conflict of interest avoided?

Background: ECONOMIC DISPATCH

In the AFC, TID indicates that one purpose of the A2PP project is to allow for better economic dispatch of TID's resources.[14] That purpose is quantified in TID's

[12] AFC, p. 3-12.
[13] AFC, p. 3-12.
[14] AFC, p. 1-1.

data responses to Staff Data Requests where TID asserts that construction of A2PP would allow Walnut Energy Center generation to be increased by 487 gwh/year (from an actual of 1614 gwh in 2008 to a potential of 2101 gwh with A2PP in service), and generation from inefficient peaking plants (with an average HHV heat rate of 10,269 Btu/kwh) would be decreased by the same 487 gwh per year.[15] TID's data response is unclear in several respects. To clarify the meaning of various terms in the data response, and to clarify the basis for various numbers in the data response, additional information is required, as requested below.

Data Requests

49. Please identify the specific simple-cycle peaking plants from which TID generated and/or purchased energy in 2008, and the monthly gwh purchased or generated for TID at each of them.

50. Please identify the basis for TID's representation that 100% of the "balance Mwh" associated with the Walnut Energy Center was supplied from simple cycle generation (and none from purchased power whose source was something other than simple cycle gas turbines).

51. Please indicate how much of the 487 gwh of "balance energy" in 2008 was supplied by the Almond 1 plant, and how much would have been supplied from Almond 1 if A2PP had been in operation in 2008.

52. Please explain how the number of A2PP units "on" was determined, given that the "Required for balance" Mw are average Mw across 24 hours per day, and not the maximum number of Mw.[16]

53. Please explain why A2PP units are assumed to have to run only 10 percent of the hours of each day to provide reserves for "balance energy" which is based on foregone Walnut Energy Center generation in all 24 hours of each day WEC ran.

54. Please confirm whether the 10 percent "CF" assumption for A2PP is actually an assumption that only certain A2PP units would run each month, and that those units would only run in 10% of the hours that Walnut Energy Center ran in, each month, at an output of only 25 Mw in each of those hours, for a capacity factor of about 8550 Mwh/(174 Mw x 8760 hours) = .0056, or less than 1 percent.[17] If not, please explain what annual capacity factor for A2PP the 8550 Mwh represents.[18]

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[15] TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 92 of 758 in the PDF file.
[16] *Id.*
[17] *Id.*
[18] *Id.*

55. Please quantify the monthly potential generation at Walnut Energy Center on "Op Days"[19] which did not occur because the WEC was either turned off, forced off, or partially forced off, and thus was not "balance" energy that could have been dispatched even if A2PP had been available.

56. Please provide hourly data for Walnut Energy Center, in Excel format if available, showing Mw output and Mw of partial and/or full forced outage for each hour.

57. Please provide copies of the load flow studies referenced on p. 6-7 of the AFC, and any memos or other reports based on those studies.

Background: INTERNAL COMBUSTION ENGINES

The AFC identifies internal combustion engines as a potential alternative quick-start technology, and gives no reason for rejecting this technology.[20] The CEC has previously approved a 163 Mw powerplant using 10 internal combustion engines.[21]

Data Request

58. In order to better understand why TID rejected this potential alternative quick-start technology which it identified in the AFC, please provide any quantitative analysis in TID's possession of the cost and/or emissions differences between the proposed A2PP project and a project meeting the same goals using internal combustion technology.

Background: OUTPUT TURNDOWN RATE

The AFC says that the proposed NOx control technology will allow "an output turndown rate of 30 percent.[22] This turndown is necessary to meet variable load demand." TID is correct that meeting variable load demand requires varying the output of generation resources. The degree to which A2PP would be capable of changing its output in response to changes in load is constrained by both emissions limits and the physical capabilities of the proposed gas turbines. In order to quantify the amount of change in A2PP output which will be possible, further information is needed on A2PP minimum generation and maximum ramp rates while meeting environmental constraints as well as physical constraints.

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[19] As the term "Op Days" is used. *Id*.
[20] AFC p. 6-27.
[21] Humboldt Bay Generating Station; see www.energy.ca.gov/sitingcases/humboldt/index.html.
[22] AFC p. 6-28.

Data Requests

59. Please provide further clarification – does the quoted language mean that each 58 Mw A2PP unit will be capable of being turned down no more than 17 Mw (30%), to 41 Mw, when operating at full power? If not, what does the 30 percent figure mean?

60. What will the limit be on ramping up generation at A2PP while complying with emissions limits?

61. What is the minimum steady-state operating level at which each A2PP generating unit will be able to operate while complying with emissions limits and maintaining stable operation?

62. When operating at the level identified in response to the previous subpart, what is the maximum increase in Mw output that will be physically possible over a ten minute period without violating any emissions limits?

Background: INADEQUACY OF SOIL SAMPLING

A February 2009 Phase I Environmental Site Assessment (ESA)[23] documented that the Site was used for agriculture and "was previously in alfalfa and possibly corn prior to 2004."[24] It further describes that WinCo, the former owners of the Site, used the Site as a burrow pit for construction of a new facility adjacent to the Site and then filled it with imported fill material.

The Phase I Environmental Site Assessment documented that the imported fill, approximately 30,000 cubic yards, came from agricultural land in Turlock that was excavated for construction of a stormwater pond. The Phase I stated:

> It was not known if the fill material was sampled for potential contaminants related to its agricultural use prior to being placed at the site.[25]

Sampling of the imported fill, as emplaced at the Site, was conducted in April 2009 to investigate the potential for the presence of pesticides.[26] The sampling effort involved the collection of a total of six samples from the fill at the site at a maximum depth of 5 feet bgs. The maximum depth of the fill was reported to be 6.5 feet and therefore the sampling targeted only imported fill.

To justify the collection of six soil samples, the report cited DTSC's Information Advisory on Clean Imported Fill Material.[27] The soil investigation report did not state the size of the area that was sampled. From Figure 2 of the Report of Findings on Soil Sampling and Analysis,[28] it appears that soil samples

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[23] Phase I Environmental Site Assessment – Almond 2 Power Plant, Ceres, Stanislaus County, California. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc. February 9, 2009. Included as Appendix 5.14A to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume_2/A2PP_Appendix_5.14A_Phase%201%20ESA.pdf

[24] Phase I ESA, p. 5.

[25] Phase I ESA, p. 1.

[26] Report of Findings on Soil Sampling and Analysis: Almond 2 Power Plant. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc. April 17, 2009. Included as Appendix 5.14B to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume_2/A2PP_Appendix_5.14B_Phase%202%20ESA.pdf

[27] Information Advisory: Clean Imported Fill Material. Department of Toxic Substances Control. October 2001. http://www.dtsc.ca.gov/Schools/upload/SMP_FS_Cleanfill-Schools.pdf

[28] Report of Findings on Soil Sampling and Analysis: Almond 2 Power Plant. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc.

were collected on approximately 3.5 acres for which, according to the DTSC guidance cited in the soil investigation report, between 6 and 7 samples would be required. However, the investigation did not include soil sampling at the existing retention pond at the Almond Power Plant that will be filled as part of the project and which may contain residual pesticides. Soils in the retention pond may also contain pesticides from past agricultural use or from usage at the power plant and heavy metals and other pollutants associated with the existing power plant. The entire Site, to include the area of the retention pond, is approximately 4.6 acres, for which the cited DTSC advisory recommends a minimum of eight samples for an area of four to ten acres.

In addition to use of the DTSC clean fill advisory guidance document, another DTSC guidance document should be followed, the 2002 DTSC Interim Guidance for Sampling Agricultural Fields for School Sites, for reference in sampling. CEC staff specifically recommended the use of this DTSC guidance document for sampling agricultural fields for school sites for another site undergoing certification.[29]

The minimum sampling locations suggested in the 2002 DTSC Interim Guidance for Sampling Agricultural Fields for School Sites for areas "greater than four (4) up to twenty (20) acres" is as follows: "discrete samples should be collected on ½ acre centers."[30] Therefore, for a site approximately 4.6 acres, approximately 10 samples would be required to be taken on half-acre centers.

As depicted in Figure 2 of the Report of Findings on Soil Sampling and Analysis, the distance between sampling points ranges from 75 feet between S1 and S2 to nearly 200 feet between S3 and S4, not on half-acre centers as the guidance recommends. Therefore, the six discrete samples collected at apparently random locations by the project proponent are inadequate. Instead, discrete samples should be collected on evenly spaced half-acre centers as recommended in the DTSC guidance.

Furthermore, the depth of the six samples collected also varied, without apparent justification, inconsistent with guidance. Samples were collected from depths ranging from six inches below ground surface (bgs) in sample S-2 to five feet bgs in sample S-5.

April 17, 2009. Included as Appendix 5.14B to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume_2/A2PP_Appendix_5.14B_Phase%202%20ESA.pdf

[29] San Joaquin Solar 1 & 2 Hybrid Project (08-AFC-12) Data Request Set 1 (#s 1-148). California Energy Commission. April 30, 2009, p. 48. http://www.energy.ca.gov/sitingcases/sjsolar/documents/2009-05-01_Staff_Data_Request_Set_01.pdf

[30] Interim Guidance for Sampling Agricultural Fields for School Sites (Second Revision). California Department of Toxic Substances Control, California Environmental Protection Agency. August 26, 2002. http://www.dtsc.ca.gov/Schools/upload/interim-ag-soils-guidance.pdf

The DTSC guidance that is recommended by CEC staff states:

Each location should be sampled to include one surface sample (0 to 6 inches) and one subsurface sample (2 to 3 foot range). [31]

Data Requests

63. Please conduct additional soil sampling to include the appropriate number of samples, appropriately spaced and at appropriate depths, consistent with DTSC guidance and with CEC recommendations. Sampling should also be conducted at the area of the retention pond at the existing power plant.

64. Please evaluate the need to collect samples below the depth of the imported fill (e.g. 6.5 feet bgs) to ensure that native soil material is not contaminated with pesticides.

Background: SOIL SAMPLING ON NATURAL GAS ROUTE

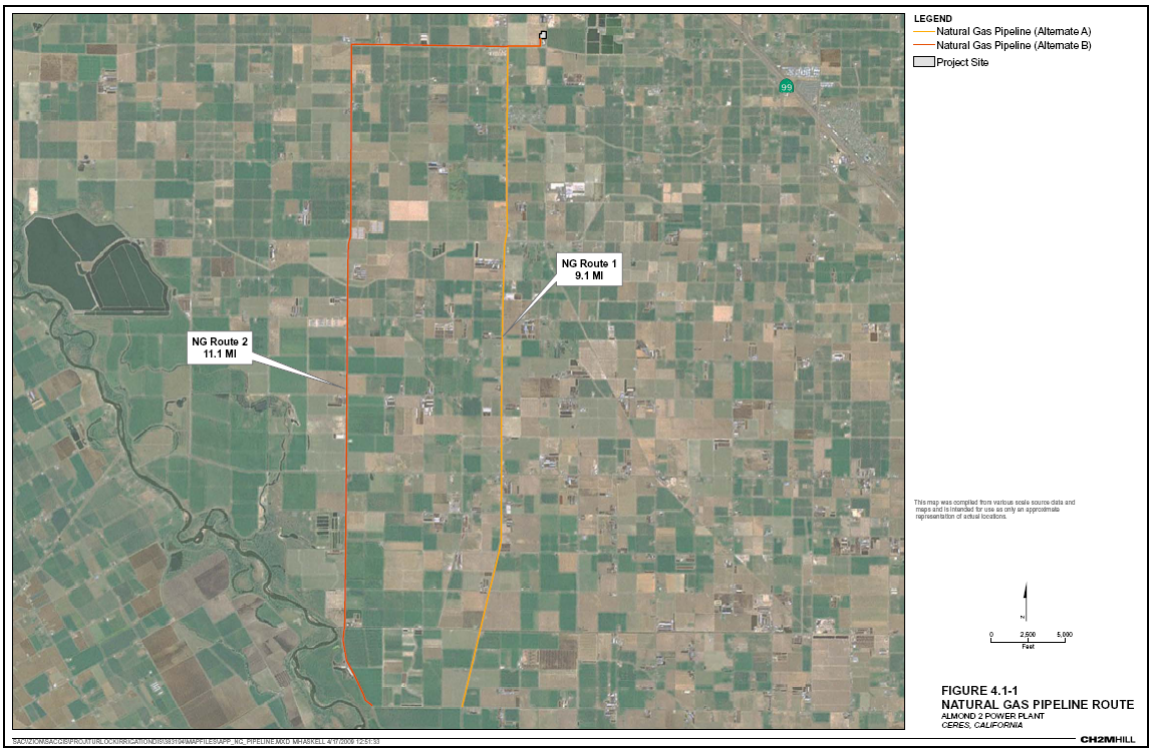
The proposed project includes construction of a natural gas pipeline. The AFC presents two alternative routes for the pipeline:

- Alternate route A is approximately 9.1-miles long. It exits the Site at the southwest corner, turns west for approximately 0.6 mile along the access road to the Almond Power Plant, and continues south along Crows Landing Road for approximately 8.5 miles.
- Alternate route B is approximately 11.1-miles long. It exits the Site at the southwest corner along the access road to the Almond Power Plant and continues for approximately 2.6 miles, and finally turns south and continues along Carpenter Road.

Neither of the natural gas pipeline alternate routes are evaluated in the ESA. The Phase I ESA report does not refer to the location of the proposed natural gas pipeline or the electricity transmission line. The excavations for the natural gas pipeline are proposed to be to a depth of 54 inches.[32]

The proposed alternate routes for the natural gas pipeline are located within areas of past agricultural activities as shown in Figure 4.1-1 of the AFC:

[31] Interim Guidance for Sampling Agricultural Fields for School Sites (Second Revision). California Department of Toxic Substances Control, California Environmental Protection Agency, p. 4, August 26, 2002. http://www.dtsc.ca.gov/Schools/upload/interim-ag-soils-guidance.pdf
[32] AFC, p. 4-1.



Soil sampling is necessary in order to ensure that the health of construction workers is not put at risk. In response to CEC Data Request Number 77 , the applicant is planning to conduct a Phase I ESA for the proposed routes.[33] However, such an investigation will not include soil testing for the potential presence of residual pesticides in soil.

Data Request

65. Please conduct a Phase II site investigation along the pipeline and electric transmission routes to include sampling for pesticides. Please ensure soil sampling is consistent with DTSC guidance.

Background: CONSTRUCTION AND LAYDOWN AREAS NEED SAMPLING

A 1.85-acre property adjacent to the proposed project site will be used as construction laydown and parking area.[34] Vehicle and heavy equipment movement is likely to result in dust and therefore the exposure of construction workers to potential contamination in the soil. However, when the soil investigation was

[33] Almond 2 Power Plant (09-AFC-02) – Data Responses, Set 1A, (Response to Data Requests 1 to 84, and Staff Query 1). Submitted to the California Energy Commission by Turlock Irrigation District with Assistance from CH2M HILL, Inc. September 2009.
http://www.energy.ca.gov/sitingcases/almond/documents/applicant/2009-09-14_Data_Response_Set_1A_TN-53225.PDF
[34] AFC, p. 1-1.

conducted in 2009, no soil samples were collected in this area to investigate the potential for the presence of pesticides.

Additionally, the maintenance shop/warehouse building at the existing Almond Power Plant will be expanded to be used jointly by the existing plant and the proposed A2PP.[35] No soil sampling has been conducted in this area.

Data Requests

66. Please conduct soil sampling in the proposed laydown area to include the appropriate locations and number of samples consistent with DTSC guidance.

67. Please conduct soil sampling in the proposed construction area that is located on the existing Almond Power Plant. This area is depicted and labeled "Proposed Expansion of Existing Building" in Figure 2.1-1 of the AFC.

[35] AFC p. 2-2 and Figure 2.1-2 on pp. 2-3, 2-4.

Background: IMPACTS TO SPECIAL-STATUS PLANTS

The AFC indicates the applicant would be conducting focused surveys for special-status plant species in 2009. Results from the surveys would then be used to determine if any special-status plants occur in the Project impact area, and to further characterize available habitat in the Project vicinity.[36] Results of the surveys are necessary before the applicant can conclude the Project will not cause any adverse impacts to biological resources.[37]

Data Request

68. Please provide the results of the special-status plant surveys or provide the estimated schedule for their release.

Background: IMPACTS TO VERNAL POOL CRUSTACEANS

The AFC indicates protocol surveys for listed vernal pool crustaceans would be conducted in spring 2009. If listed vernal pool crustaceans are not identified during the first season of dry season sampling, the applicant proposes to consult with the U.S. Fish and Wildlife Service (USFWS) to negotiate the possibility of avoiding further sampling.[38] The survey guidelines established by the USFWS indicate a complete survey consists of either: 1) two full wet season surveys done within a 5-year period; or 2) two consecutive seasons of one full wet season survey and one dry season survey (or one dry season survey and one full wet season survey).[39] Any deviations from the methods prescribed by the guidelines must be approved by the USFWS before surveys are conducted.[40] Furthermore, permission to conduct only dry season surveys for the listed vernal pool branchiopods requires the completion of both the full wet season survey and the dry season survey, including the complete analysis of all dry soil samples.[41]

The applicant justifies the proposal to avoid a wet season survey by stating vernal pool crustaceans were not present at the nearby Walnut Energy Center, and the closest documented occurrence of vernal pool crustaceans is more than 10 miles

[36] AFC, p. 5.2-17.
[37] AFC, p. 5.2-47.
[38] AFC, p. 5.2-18.
[39] United States Fish and Wildlife Service. 1996. Interim survey guidelines to permittees for recovery permits under Section 10(a)(1)(A) of the Endangered Species Act for the listed vernal pool Branchiopods [internet]. Sacramento (CA): United States Fish and Wildlife Service, Sacramento Fish and Wildlife Office. Available from: <http://www.fws.gov/sacramento/es/protocol.htm>.
[40] *Id.*
[41] *Id.*

from the Project site.[42] In general, vernal pool crustaceans have a sporadic distribution, with a species inhabiting only one or a few vernal pools in otherwise more widespread vernal pool complexes.[43] [44] For example, studies on occupancy detected vernal pool fairy shrimp in only 5%[45] to 16%[46] of the pools sampled. As a result, the USFWS concluded the thermal and chemical properties of vernal pool waters are two of the primary factors affecting the distributions of specific fairy shrimp species, or their appearance from year to year.[47]

The distance of the Project site from the nearest documented occurrence of vernal pool crustaceans is not a reliable predictor for likelihood of occurrence in the Project area. The four listed species of concern are known to have disjunct and discrete populations throughout their respective geographic ranges, with some populations existing within a single isolated pool.[48] Several populations are many miles (i.e., > 10) away from the next nearest population.[49] Furthermore, existing scientific information on shrimp dispersal does not support distance as factor in likelihood of occurrence. Crustaceans such as the vernal pool fairy shrimp and vernal pool tadpole shrimp produce cysts (or eggs) that lie buried in the soil.[50] The combination of winter rains and appropriate water temperatures trigger the

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[42] AFC, p. 5.2-18.
[43] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).
[44] United States Fish and Wildlife Service. 2007. Vernal pool tadpole shrimp (*Lepidurus packardi*), 5-year review: summary and evaluation [internet]. Sacramento, CA, 49 pp. Available from: <http://www.fws.gov/cno/es/images/graphics/vp%20tadpole%20shrimp_5%20yr%20review%20final%20cno%2027sept07.pdf>
[45] U.S. Fish and Wildlife Service. 2005. Recovery plan for vernal pools ecosystems of California and Southern Oregon. U.S. Fish and Wildlife Service, Portland, Oregon. 606+ pp.
[46] Helm, B. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124-139. *In* Ecology, conservation, and management of vernal pool ecosystems – proceedings from a 1996 conference, C. W. Witham, E.T. Bauder, D. Belk, W.R. Ferren,Jr., and R. Ornduff, eds. California Native Plant Society, Sacramento, California. 285 pp.
[47] United States Fish and Wildlife Service. 2007. Vernal pool fairy shrimp (*Branchinecta lynchi*), 5-year review: summary and evaluation [internet]. Sacramento, CA, 74 pp. Available from: <http://www.fws.gov/cno/es/images/Graphics/VPFS_5-yr%20review%20CNO%20FINAL%2027Sept07.pdf>.
[48] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).
[49] California Natural Diversity Database. 2009. Rarefind [computer program]. Version 3.1.0. 2009 Aug 30. Sacramento (CA): Wildlife & Habitat Data Analysis Branch. California Department of Fish and Game.
[50] United States Fish and Wildlife Service. 2007. Vernal pool fairy shrimp (*Branchinecta lynchi*), 5-year review: summary and evaluation [internet]. Sacramento, CA, 74 pp. Available from: <http://www.fws.gov/cno/es/images/Graphics/VPFS_5-yr%20review%20CNO%20FINAL%2027Sept07.pdf>.

hatching of these cysts. Long-distance dispersal of cysts is thought to be enabled by waterfowl and other migratory birds that ingest cysts, and by animals that provide for movement of mud and cysts on feathers, fur, and hooves.[51] As a result, in listing the species, the U.S. Fish and Wildlife Service concluded that *"environmental requirements, not dispersal, is likely the limiting factor in the distribution of the fairy shrimp and the vernal pool tadpole shrimp."*[52]

Data Requests

69. Please provide any empirical evidence the applicant has that supports:
    a. distance to nearest documented occurrence as a good predictor of vernal pool crustacean presence; and,
    b. a single survey effort as sufficient in predicting vernal pool crustacean absence.
70. Please provide the results of the vernal pool crustacean surveys or provide the estimated schedule for their release.
71. Please indicate whether the USFWS approved the proposed deviations from the survey guidelines (i.e., only a single dry season survey) before surveys were conducted.
72. Please indicate whether the applicant continues to propose conducting only a single dry season survey. If the answer is yes, please provide the USFWS's response, if any, to the applicant's intent to avoid further sampling.

Background: IMPACTS TO SAN JOAQUIN KIT FOX

The AFC identifies the potential for San Joaquin kit fox to occur in the Project area. The USFWS has developed recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance.[53] The mitigation and monitoring measures listed in the AFC do not incorporate these recommendations.

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[51] United States Fish and Wildlife Service. 2007. Vernal pool tadpole shrimp (*Lepidurus packardi*), 5-year review: summary and evaluation [internet]. Sacramento, CA, 49 pp. Available from: <http://www.fws.gov/cno/es/images/graphics/vp%20tadpole%20shrimp_5%20yr%20review%20final%20cno%2027sept07.pdf>

[52] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).

[53] United States Fish and Wildlife Service. 1999. Standardized recommendations for protection of the San Joaquin Kit Fox prior to or during ground disturbance. Prepared by the Sacramento Fish and Wildlife Office, June 1999. Available at: www.fws.gov/sacramento/es/documents/kitfox_standard_rec.PDF

Data Requests

73. Please indicate whether the applicant will implement the kit fox protection measures recommended by the USFWS. Specifically, please state whether the applicant will:

    a. Use plywood or similar materials to cover all excavated, steep-walled holes or trenches more than 2 feet deep, or provide them with one or more escape ramps constructed of earth fill or wooden planks at the close of each working day.

    b. Thoroughly inspect all holes or trenches for trapped animals before they are filled.

    c. Thoroughly inspect all construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that have been stored at the construction site for one or more overnight periods before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

    d. Assign a representative to serve as the contact source for any kit foxes that are inadvertently killed or injured, or for a kit fox that is found dead, injured, or entrapped.

    e. Immediately report any inadvertently killed or injured kit fox to the USFWS and California Department of Fish and Game (CDFG).

    f. Implement an employee education program.

    g. Conduct preconstruction/preactivity surveys no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities that may impact the kit fox.

Background: IMPACTS TO BURROWING OWL

The AFC identified a high potential for burrowing owls to occur in the Project area.[54] To mitigate potential impacts to the species the AFC indicates "Preconstruction field surveys (conducted under CDFG guidelines) to identify active nest sites will be conducted in the spring (February, March, April, May, and June) before construction begins (CBOC, 1993)."[55] Although they are similar, the survey guidelines issued by CDFG differ from those issued by the California Burrowing Owl Consortium (i.e., CBOC 1993).[56] [57] As a result, it's unclear which guidelines

[54] AFC, Table 5.2-1.
[55] AFC, p. 5.2-38.
[56] *See* The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Available online at: http://www.dfg.ca.gov/wildlife/species/docs/boconsortium.pdf.

the applicant intends to follow in conducting burrowing owl surveys. Regardless, both survey guidelines state that burrowing owl and burrow surveys should be conducted during both the wintering and nesting seasons.[58] Winter season surveys should be conducted between December 1 and January 31, and nesting season surveys should be conducted between April 15 and July 15 (the peak of the breeding season).[59] The applicant's proposed survey periods do not include a winter season survey, and they only partially encompass the recommended timeframe for breeding season surveys.

Data Requests

74. Please specify whether burrowing owl surveys will adhere to the guidelines issued by CDFG, or to the guidelines issued by the California Burrowing Owl Consortium (CBOC). If the CBOC guidelines will be followed, please confirm that the surveys will include four separate site visits during which the Project area and potential burrows are observed from multiple fixed locations.
75. Please clarify whether the applicant will conduct a winter season survey for burrowing owls.
76. Please clarify how many burrowing owl surveys will be conducted during the recommended timeframe of April 15 to July 15 (for breeding season surveys).

[57] *See* California Department of Fish and Game. 1995. Staff report on burrowing owl mitigation. Available at: www.dfg.ca.gov/wildlife/nongame/docs/burowlmit.pdf
[58] *Id.*
[59] *Id.*

Background: CUMULATIVE IMPACTS OF HUGHSON-GRAYSON PROJECT AND ADDITIONAL ANALYSIS

Turlock Irrigation District (TID) has proposed a new double-circuit 115-kV transmission line and substation known as the Hughson-Grayson 115-kV Transmission Line and Substation Project. TID would construct a 10 mile 115-kV transmission line and a 7.35-acre Grayson substation. The substation will sit approximately 3,300 feet from the A2PP.[60] In the Draft EIR for the Hughson-Grayson project released on August 10, 2009, TID discussed several potential cumulative impacts that were not analyzed in the Almond 2 AFC. These include hazards from electromagnetic fields, noise, and transmission impacts to agricultural equipment operation and crop dusting.[61]

Data Requests

77. Please discuss potential cumulative electromagnetic fields impacts from the Hughson Grayson project and the A2PP.

78. Please discuss the potential cumulative noise impacts from the Hughson Grayson project and the A2PP.

79. Please describe how the cumulative impacts from the A2PP and the Hughson-Grayson project may limit agricultural equipment operation and crop dusting.

80. What additional cumulative impacts will be discussed that are not currently analyzed in the AFC? When will the additional cumulative impacts analysis be docketed?

[60] Energy Commission Staff July 15, 2009 Issues Identification Report.
[61] Hughson Grayson DEIR p. 6-5.

Background: EXISTING AM AND PM PEAK HOUR COUNT DATA

Page 5.12-7 of the AFC states "Existing morning peak period (7:00 AM to 9:00 AM) and evening peak period (4:00 PM to 6:00 PM) turning movement volumes at the study intersections were obtained from the West Ceres Specific Plan Opportunities and Constraints Analysis Report, May 2008 and are illustrated in Figure 5.12-3."

Data Request

81. Please provide the count data referenced on Page 5.12-7 of the AFC.

Background: TRAFFIC LANES FOR EXISTING CONDITIONS

Section 5.12 of the AFC does not include a figure showing left turn, through, and right turn lanes at each study intersection for existing conditions.

Data Request

82. Please provide either a figure or a listing showing left turn, through, and right turn lanes on each approach for existing conditions at each of the study intersections.

Background: DELAY/LOS CALCULATIONS FOR EXISTING CONDITIONS

Table 5.12-2 of the AFC summarizes the delay and LOS values for the study intersection operations for existing conditions.

Data Request

83. Please provide the supporting calculations for the delay and LOS values for the study intersection operations for existing conditions (Table 5.12-2).

Background: PASSENGER CAR EQUIVALENTS FOR HEAVY VEHICLES

Page 5.12-17 of the AFC states "…the truck trips were converted to passenger car equivalent units (PCEs) at a ratio of 1.5 passenger cars for each truck, consistent with the 2000 HCM guidelines." Page 16-10 of the Highway Capacity Manual 2000 states "Heavy vehicles are defined as those with more than four tires touching the pavement" and "The passenger car equivalent for each heavy vehicle is 2.0 passenger car units…"

Data Request

84. Please justify the use of 1.5 passenger car equivalents rather than 2.0 passenger car units as indicated in the Highway Capacity Manual 2000.

Background: WORKFORCE CARPOOL ESTIMATE

Page 5.12-17 states "Based on experience with similar projects, it is estimated that 20 percent of the workforce will carpool..." No data is provided in Section 5.12 to support this estimate.

Data Request

85. Please provide data and support for the estimate that "…20 percent of the workforce will carpool."

Background: AM AND PM PEAK HOUR CONSTRUCTION TRIPS

Page 5.12-18 of the AFC states "The peak hour traffic generated during the construction period was added to the existing turning movement counts..."

Data Request

86. Please provide either a figure or a listing showing left turn, through, and right turn construction traffic volumes forecast in the AM and PM peak hours at each of the study intersections.

Background: DELAY/LOS CALCULATIONS FOR EXISTING PLUS PROJECT

Table 5.12-8 of the AFC summarizes the delay and LOS values for the study intersection operations for existing plus construction traffic conditions.

Data Request

87. Please provide supporting calculations for delay and LOS values for existing plus construction traffic conditions (Table 5.12-8).

Background: UNEXPLAINED REDUCTIONS IN DELAY

Page 5.12-18 of the AFC compares Tables 5.12-2 and 5.12-8, indicating "all of the study intersections will operate at the same LOS as existing conditions."

Data Request

88. Please explain how Intersection #1 (Crows Landing Road/Service Road in both peak hours), Intersection #2 (Crows Landing Road/Hackett Road in the AM peak hour), and Intersection #3 (Crows Landing Road/Whitmore Avenue in the AM peak hour) will operate with less delay with project construction traffic added than they do with only existing traffic volumes.

Background: SIGNIFICANT PROJECT TRAFFIC IMPACT/MITAGATION MEASURES AT CROWS LANDING ROAD/NORTHBOUND SR 99 RAMPS

Page 5.12-18 of the AFC compares Tables 5.12-2 and 5.12-8, indicating "all of the study intersections will operate at the same LOS as existing conditions." Intersection 5, Crows Landing Road/Northbound SR 99 Ramps, operates at LOS E in the PM peak hour with 43 seconds of delay under existing traffic volumes and degrades to 46 seconds of delay with construction traffic from the Almond 2 Power Plant added. LOS E does not satisfy Caltrans LOS C/D standard. A three second increase in delay at an intersection operating at LOS E must be considered as a significant traffic impact that requires mitigation.

Data Requests

89. Please explain why the three second increase in delay in the PM peak hour at the Crows Landing Road/Northbound SR 99 Ramps caused by the addition of construction traffic from the A2PP does not constitute a significant project traffic impact.

90. Please develop measures to mitigate the significant traffic impact in the PM peak hour caused by A2PP construction traffic at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps.

91. Is the A2PP willing to pay its fair share of improvements (such as traffic signal installation) at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps?

Background: TRAFFIC LANES FOR YEAR 2011 CONDITIONS

Section 5.12 of the AFC does not include a figure showing left turn, through, and right turn lanes at each study intersection in the first quarter of Year 2011.

Data Request

92. Please provide a figure or a listing showing the left turn, through, and right turn lanes on each approach at each of the study intersections for future conditions in the first quarter of Year 2011 (month 6 of construction).

Background: TRIP FORECASTS FOR NEARBY APPROVED PROJECTS

Page 5.12-28 of the AFC identifies three approved industrial projects and three approved residential projects within one mile of the project site, with a total of 30 approved project applications in the City of Ceres. It is reasonably foreseeable that these approved projects will be constructed, occupied, and generate additional AM and PM peak hour trips in the first quarter of Year 2011.

Data Request

93. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for the 30 approved project applications in the City of Ceres.

Background: HUGHSON-GRAYSON TRAFFIC VOLUMES IN 2011

Page 5.12-28 of the AFC states "TID is preparing an Environmental Impact Report (EIR) for the TID Hughson-Grayson 115-kV Transmission Line and Substation Project" which includes a 69-kV transmission line from the existing Almond 1 with construction beginning in late fall 2010. While the construction schedule for the Hughson-Grayson 115-kV Transmission Line and Substation Project was not known earlier this year, the A2PP will likely be under construction at the same time as the Hughson-Grayson Project.

Data Request

94. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for construction traffic in Year 2011 for the Hughson-Grayson 115-kV Transmission Line and Substation Project.

Background: CUMULATIVE BASELINE TRAFFIC VOLUMES IN 2011

When the A2PP is under construction in Year 2011, traffic already passing through the study intersections in the AM and PM peak hours will include existing

traffic volumes, trips to and from the 30 approved project applications in the City of Ceres, and trips to and from Hughson-Grayson 115-kV Transmission Line and Substation Project.

Data Request

95. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for existing conditions plus trips for the 30 approved project applications in the City of Ceres plus forecast construction trips in 2011 for the Hughson-Grayson Project.

Background: CALCULATIONS FOR 2011 CONDITIONS WITHOUT A2PP

To properly establish Year 2011 baseline conditions, it is necessary to calculate delay and LOS for cumulative traffic conditions for AM and PM peak hours in 2011 at all study intersections including existing traffic volumes plus trips for the 30 approved project applications in the City of Ceres plus forecast construction trips for the Hughson-Grayson Transmission Line and Substation Project.

Data Request

96. Please provide delay and LOS calculations for baseline cumulative traffic conditions for AM and PM peak hours in 2011 at all study intersections including existing traffic volumes, trips for the 30 approved projects in the City of Ceres, and construction trips for the Hughson-Grayson Project.

Background: DELAY/LOS FOR 2011 CONDITIONS WITH A2PP

Section 5.12 of the AFC does not identify delay or LOS at the study intersections in Year 2011 with A2PP construction traffic added.

Data Request

97. To properly determine intersection operating conditions in Year 2011 when peak construction activity for the A2PP will occur, please provide LOS and delay calculations for Year 2011 traffic conditions with construction traffic added for the A2PP.

Background: SIGNIFICANT TRAFFIC IMPACTS/MITIGATION MEASURES FOR YEAR 2011 CONDITIONS WITH A2PP

Section 5.12 of the AFC does not identify significant traffic impacts by comparing delay and LOS at the study intersections under cumulative baseline conditions in Year 2011 to those that will occur with construction traffic added from the A2PP. With the Crows Landing Road/Northbound SR 99 Ramps already significantly impacted in the PM peak hour by A2PP construction traffic under the AFC analysis of existing conditions, it is probable that this intersection will also be significantly impacted in the Year 2011 analysis.

Data Requests

98. Please compare delay and LOS at the study intersections under cumulative baseline conditions in Year 2011 to those that will occur with construction traffic added from the A2PP.

99. Please develop measures to mitigate the significant traffic impact in the PM peak hour caused by A2PP construction traffic at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps.

100. Is the A2PP willing to pay its fair share of improvements (such as traffic signal installation) at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps?

101. Please describe what mitigation measures will be taken at other intersections if significant traffic impacts are found to reduce the impacts to a level that is less than significant.

Background: IMPACTS TO BIKEWAYS

Figure 5.12-2 indicates Crows Landing Road and Grayson Road have designated bikeways. Section 5.12 does not disclose, analyze, and mitigate any potentially significant impacts to these bikeways caused by the additional traffic during construction.

Data Request

102. Please disclose and analyze any potentially significant impacts to the bikeways on Crows Landing Road and Grayson Road caused by the additional traffic during construction. If a significant impact is found, please describe what mitigation measures will be taken to reduce the impact to less than significant.

Background: GAS LINE CONSTRUCTION IMPACTS

Page 1-2 of the AFC indicates that the project includes a new natural gas supply along Crows Landing Road for 9.1 miles or along Carpenter Road for 11.1 miles. The gas line will probably be constructed within the traveled way on either route.

Data Requests

103. Please disclose, analyze, and mitigate any potentially significant impacts to traffic during construction of the gas line on either route.

104. Please disclose, analyze, and mitigate any potentially significant impacts to the bikeways caused by construction of the gas line on either route.

Background: CONSTRUCTION ACCESS AND PARKING

The AFC does not analyze the level of traffic control at the vehicle access point or the amount of parking proposed during construction.

Data Request

105. Please disclose, analyze, and mitigate any potentially significant impacts to traffic at the proposed vehicle access point connecting to Morgan Road during construction.

106. Please disclose, analyze, and mitigate any potentially significant impacts regarding the parking supply that will be provided during construction.

DECLARATION OF SERVICE

I, Bonnie Heeley, declare that on October 14, 2009, I served and filed copies of the attached CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE (NOS. 1 – 106), dated October 14, 2009. 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/almond/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 via email and by depositing in the United States mail at South San Francisco, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list to those addresses NOT marked "email preferred."

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, CA this 14th day of October, 2009.

_____/s/_____
Bonnie Heeley

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