

CALIFORNIA ENERGY COMMISSION

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**DOCKET****11-AFC-1**DATE 05/25/11RECD. 05/25/11

May 25, 2011

Pio Pico Energy Center, LLC
David Jenkins, Project Manager
1293 E. Jessup Way
Mooreville, IN 46158

RE: PIO PICO ENERGY CENTER (11-AFC-1), Data Requests 1 through 59

Dear Mr. Jenkins,

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests 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.

These data requests are being made in the technical areas of: Air Quality, Biological Resources, Cultural Resources, Land Use, Socioeconomics, Traffic and Transportation, Transmission System Engineering, Water Resources, Visual Resources and Worker Safety & Fire Protection. Written responses to the enclosed data requests are due to the Energy Commission staff on or before June 24, 2011, or at such later date as may be mutually agreed upon.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 651-0966.

Sincerely,

Eric Solorio
Siting Project Manager

Enclosure (Data Request Packet)
cc: Docket (11-AFC-1)

Technical Area: Air Quality
Authors: Tao Jiang and Wenjun Qian

AIR QUALITY PERMIT APPLICATION

BACKGROUND

The proposed project will require permits (the Preliminary Determination of Compliance and Final Determination of Compliance) from the San Diego Air Pollution Control District (SDAPCD or "District"). These permits are integrated into the staff analysis. Therefore, staff will need copies of all correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Analysis.

DATA REQUEST

1. Please provide copies of all substantive District correspondence regarding the permit application, including e-mails, within one week of submittal or receipt. This request is in effect until the Final Determination of Compliance is issued by the District.

CONSTRUCTION EMISSIONS AND MODELING

BACKGROUND

The AFC Table 5.2-14 to 5.2-15 and Appendix Table G-2.1 to G-2.5 list the categorized emissions during project construction. The modeling of these emissions is described on Appendix page G-2-5. For the modeling of NO₂, CO and SO₂, staff is able to match the emission sources listed in the data tables with those in the modeling inputs. However, in the modeling of PM₁₀ and PM_{2.5}, both the number of sources and emission rates are inconsistent with those listed in AFC tables and modeling description. In addition, the AFC Table 5.2-15, Appendix Table G-2.2 and G-2.5 list the peak annual emissions during project construction. However, these tables are inconsistent in PM₁₀ and PM_{2.5} emissions. More specifically, in Table 5.2-15 and Table G-2.2, the total emissions do not match the sum of the emissions from the sub-categories for PM₁₀ and PM_{2.5}.

DATA REQUESTS

2. Please check the calculations of construction PM₁₀ and PM_{2.5} emissions in Table 5.2-15, Appendix Table G-2.2 and G-2.5 to correct the inconsistency.
3. Please describe how the construction emission sources in the PM₁₀ and PM_{2.5} modeling files correspond to those listed in the data tables (AFC Table 5.2-14 to 5.2-15 and Appendix G-2.1 to G-2.5).

COOLING TOWER EMISSIONS AND MODELING

BACKGROUND

The operation modeling provided by the applicant presents different operating scenarios of the three turbines during operation. However, staff cannot find any sources corresponding to the cooling tower in the PM₁₀ modeling files. Although staff is able to find emission sources corresponding to cooling towers in PM_{2.5} refined modeling, the

emission rate in the modeling is 0.03 lb/hr per cell, instead of 0.055 lb/hr as shown in Table G-3.2. In addition, staff found inconsistencies between cooling tower PM emissions in Table 5.2-20, Table G-3.2, and Table G-3.3.

DATA REQUESTS

4. Please check the calculations in Table 5.2-20, Table G-3.2, and Table G-3.3 to correct the inconsistencies in cooling tower PM emissions.
5. Please add emission sources corresponding to the cooling tower in PM10 dispersion modeling to account for the impacts due to the cooling towers.
6. Please check the PM2.5 emission rate of the cooling tower and update the modeling.

MISSING DATA SUBSTITUTION

BACKGROUND

The supplemental air quality modeling files submitted on March 8, 2011 indicate that dispersion modeling has been rerun using the updated meteorology files provided by the District in early February. The difference between the updated and the original meteorology data files is that the missing data during November-December 2008 have been filled in. Also, staff noticed that raw data files of ozone and NO₂ from the ARB website have missing periods while the data submitted by the applicant are complete. The AFC indicates that these data files are provided by the District who ensures that there will be no gaps in the data.

DATA REQUESTS

7. Please describe the procedures that the District or the applicant used in missing data substitution for meteorology, ozone and NO₂ files.
8. Please describe if the data substitution procedures satisfy the guidance from the U.S. Environmental Protection Agency (US EPA) or the Air Resources Board.

OPERATION NO₂ MODELING

BACKGROUND

Supplemental air quality analysis submitted on March 8, 2011 shows that the total impact during commissioning will exceed the state 1-hour NO₂ standard based on the sum of the worst-case project impact and the worst-case background concentration. Therefore cases with modeled impact > 184 µg/m³ were selected and listed in table 5.2-26A. The total NO₂ impact would be lower than the state standard if the modeled project impacts are paired with the corresponding measured ambient concentrations. However, staff believes that the cases with highest project impacts and the cases with highest total impacts are not equivalent due to the uncertainty of background values. In addition, staff noticed that the in-stack NO₂/NO_x ratio is chosen to be 0.24 in commissioning and startups modeling and 0.13 in normal operations modeling.

DATA REQUESTS

9. Please justify the selection of the different in-stack NO₂/NO_x ratios in the modeling of commissioning, startups and normal operations.
10. Please rank and list the highest total NO₂ impacts (the sum of the modeled project impact and background concentration) during the 3-year period in order to determine the maximum total impact, rather than only listing the cases with project impact > 184 µg/m³.

CUMULATIVE AIR QUALITY IMPACTS

BACKGROUND

The AFC (Section 5.2.5 and Appendix G-6) describes a cumulative impact analysis, which only includes a list of foreseeable projects within a 6-mile radius, i.e. the projects that have received construction permits, but are not yet operational, and those that are in the permitting process, or can be expected to be in permitting in the near future. None of these sources were evaluated because their emissions are less than 5 TPY of any pollutant. A complete cumulative impacts analysis should consider all existing and planned stationary sources that affect the baseline conditions. The cumulative analysis needs to identify the major existing and planned projects near the project site, especially the existing power plants (for example, Otay Mesa Generating Project, Calpeak Border Peaker Project and Larkspur Energy Facility Emergency Peaker Project) and consider them in the modeling effort. The impact from the nearby sources may not be reflected in the background data, which were obtained at the Chula Vista station located 9 miles from the project site.

DATA REQUESTS

11. Please provide a copy of the District's correspondence regarding existing and planned cumulative sources located within six miles of the PPEC site.
12. Please provide the list of sources to be considered in the cumulative air quality impact analysis.
13. Please provide the cumulative modeling and impact analysis, including PPEC and other identified existing and planned projects within 6 miles of the PPEC site.

Thermal Efficiency and Greenhouse Gas Emissions

BACKGROUND

Heat rates in the AFC Section 3 are only shown on the basis of the lower heating value (LHV) of the fuel. Energy Commission staff requests that heat input information and thermal efficiency of the proposed power plant be stated in LHV and higher heating value (HHV) terms.

DATA REQUEST

14. Please provide the heat rate information for the proposed combustion turbines (in AFC Facility Description, Figure 3.5-2A to 3.5-2D) in terms of higher heating value, to better facilitate comparisons with other power plant data used by staff in determining greenhouse gas impacts.

Technical Area: Biological Resources
Author: Carol Watson

BACKGROUND

The AFC (page 5.6-16) states that 3.7 acres of waters of the US and 0.1 acre of -waters of the US with US Army Corp-defined wetlands occur within the study area. Temporary impacts to 0.1 acre of non-wetland waters of the US will occur. However on page 5.6-19 it is stated that the project will not adversely impact any federal or state protected waters. Staff requires further information to be able to evaluate the impacts of the project, and determine if any mitigation is required.

DATA REQUESTS

15. Please provide additional information on temporary impacts to waters of the US. Describe the type of impact, equipment to be used, construction methods and processes, and expected duration of temporary impacts.
16. Please provide maps of scale roughly at 1:100 feet (or finer) that depict areas to be impacted, including the 0.1 acre of non-wetland waters impacted, and the location of the 3.7 acre of waters of the US. Please use aerial maps with topographic overlay. Please clarify the location of non-wetland waters totaling 0.1 acre, and the US Army Corp-defined 0.1 acre wetland.
17. Please describe proposed best management practices to be used, and restoration activities to be performed, or other applicable mitigation, to minimize and restore temporary impacts to waters.
18. Please provide an update of consultation progress with the US Army Corp of Engineers, the Regional Water Quality Control Board for Section 401 permit,.

BACKGROUND

Page 5.6-4, Table 5.6-1, describes acreages of vegetative communities mapped within the study area, which includes a 1,000-foot buffer surrounding the project. Staff is unable to distinguish between onsite and offsite resources; and therefore cannot complete its analysis of project impacts.

DATA REQUEST

19. Please differentiate between vegetation type location onsite and vegetation type mapped within the study area buffer zone. Clarifications should be made to tables throughout the AFC that depict vegetation acreage, and an additional map should be created. This map can be based off Figure 5.6-4, Vegetation Communities/Land Cover Type, but should be plotted onto a topographic map, and clearly showing project vegetation types, and vegetation types within the study area buffer zone.

BACKGROUND

Tables 5.6-2 and 5.6-3 lists plant and wildlife species observed within the study area, respectively. The blue gray gnatcatcher was observed within the study area; however, in Table 5.6-5, a similar species with similar habitat requirements, the coastal California gnatcatcher, is listed as “absent” the potential of occurrence on the project. Staff requires clarification of the information used to eliminate species from further review within the AFC.

DATA REQUEST

20. For both tables 5.6-2 and 5.6-3 please differentiate observations of species within the study area from species observed within the project site. Please provide a textual description of species eliminated from further review and considerations used in eliminating species from further analysis within the AFC. Please provide literature references, personal communications, or any other information source used in making determinations of presence or absence.

BACKGROUND

Page 5.6-17 references surveys and literature review that supports the assertion that the project study area does not contain denning or nesting sites for common and or special status species, and that no active nesting raptor or passerine birds were observed in the study area. Staff needs further information to complete analysis of the projects’ conformance with the Migratory Bird Treaty Act, and with Fish and Game codes relative to protection of furbearing mammals.

DATA REQUEST

21. Please provide citations for literature, and describe survey results that support assertion that no denning or nesting sites for special status species occur within the study area. Discuss the potential of the surrounding adjacent landscape to support populations of special status species.

BACKGROUND

Page 5.6-20 of the AFC states that potential collision hazards may exist with the 100-foot tall stacks, and that several raptors, such as red-tailed hawk, Cooper’s hawk, and barn owls may potentially collide with the stacks. With the information currently provided, staff is currently unable to ascertain if collisions will be an impact of the project. Analysis of any necessary minimization techniques, as well as the project’s conformance with applicable federal guidelines (Migratory Bird Protection Act) and voluntary guidelines which are jointly issued by the USFWS and the Avian Power Line Interaction Committee, will not be possible until required information is supplied, including information on the T-line poles and towers.

DATA REQUEST

22. Please provide information that was used to determine the potential for collisions. Document existing known raptor nest sites and distance to the project site, and how the location of the stacks within the surrounding ecosystem, and design details of the stacks may or may not contribute to the potential of collisions.

23. Please also identify potential mitigation measures, including best management practices available to lessen the effects. Please also discuss how power lines and poles or towers may be adapted to prevent raptors from attempting to perch or nest upon them, which can result in electrocutions, provide specifications of the power lines, and describe if the project will be in conformance with the voluntary Avian Power Line Interaction Committee guidelines.

BACKGROUND

Pages 5.6-18-5 and 6-19 provides details of construction impacts, and references a short-term loss of habitat, and states that the project may only temporarily and incrementally increase habitat fragmentation on a regional level. Information provided is insufficient to allow staff to conduct analysis of indirect effects of construction activities, such as noise, lighting, and vibrations, or to support the claim of temporary/incremental habitat fragmentation.

DATA REQUESTS

24. Please provide information on extent and/or duration of any proposed construction and operational nighttime lighting, noise impacts and attenuation across the site and into the study area, and vibratory effects. Current background noise levels and anticipated project-related noise levels (both construction-related and operational) must be described within the biological section of the AFC, as well as available species-specific thresholds. Please conduct a literature review and consult with CDFG and the USFWS to identify noise threshold standards for wildlife, particularly special-status wildlife species.

25. Please identify specific mitigation/minimization measures to be implemented to limit impacts of construction effects, including but not limited to lighting, noise, vibratory effects, or any other indirect effect caused by construction. These would include any use of directional lighting, limits to extent of lighting or particularly noisy equipment during special status species breeding time periods.

BACKGROUND

Page 5.6-20 of the AFC describes air emissions as an operational impact associated with the project. The project's anticipated NOx emissions may contribute to the ongoing (cumulative) degradation of endangered species habitat located near the project site. NOx emissions are a concern of USFWS and CDFG, and staff will be pursuing the issue with those agencies, and share information with the applicant as it becomes available.

DATA REQUESTS

26. Please quantify the existing baseline total nitrogen deposition rate in the vicinity of the project in kg/ha/yr. The geographical extent of the nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance for vegetation communities. Conduct a literature review and consult with CDFG and USFWS to identify appropriate thresholds. Thresholds for nitrogen deposition by vegetation type are available within the March 2007 California Energy Commission PIER report, titled

“Assessment of Nitrogen Deposition: Modeling and Habitat Assessment,” available at: <http://www.energy.ca.gov/2006publications/CEC-500-2006-032/CEC-500-2006-032.PDF>, and the May 2006 2007 California Energy Commission PIER report, titled “Impacts of Nitrogen Deposition on California Ecosystems and Biodiversity, available at: <http://www.energy.ca.gov/2005publications/CEC-500-2005-165/CEC-500-2005-165.PDF>.

27. The analysis should specify the amount of total nitrogen deposition in kg/ha/yr in special status habitats, vegetation types, and critical habitat, for wet and dry deposition. Please provide the complete citation for references used in determining this number.
28. Please provide an isopleths graphic over USGS 7.5 minute maps (or equally detailed maps) of the direct nitrogen deposition rates caused by the project. This will be a graphical depiction of the projects’ nitrogen deposition.
29. Please also provide a cumulative impact analysis of the nitrogen deposition values in kg/ha/yr. Provide an isopleths graphic over USGS 7.5-minute maps of the direct nitrogen deposition values in the cumulative analysis and specify the cumulative nitrogen deposition rate in kg/ha/yr at any affected special status habitat, vegetation type, or critical habitat. The geographical extent of the cumulative nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance.
30. Please describe potential mitigation to decrease cumulative nitrogen deposition impacts to less than significant levels for any affected resources, particularly Quino checkerspot critical habitat, special status vegetation types, or other special status habitat. Levels of significance should be determined using the references cited in data request 12, or as otherwise specified and agreed-upon by the California Energy Commission, CDFG, and USFWS.

Technical Area: Cultural Resources
Author: Sarah Allred

BACKGROUND

The applicant states that 44 previous cultural resources studies have occurred within the project site, laydown area, and/or transmission and gas line corridors (8 studies within the project/laydown areas and 36 within the transmission/gas line corridors), collectively referred to here as the “project area of analysis.” While maps were included in the AFC to depict the geographic locations of the previous survey areas, it is difficult to discern from these maps where these survey areas relate to the various portions of the project area of analysis. Absent a reasonable understanding of these relationships, staff would be unable to use the older technical data to derive any useful characterizations of the past cultural resources inventories of the project area of analysis and vicinity or to subsequently construct a cultural resources baseline to assess the results of the current inventory effort.

DATA REQUEST

31. In order for staff to more meaningfully understand the degree of prior survey coverage in the project area of analysis, please indicate the percentage of previous cultural resources survey coverage that has occurred in each portion of the project area of analysis (i.e., how much of the project site, laydown, natural gas line, transmission line, etc. have been previously surveyed).

BACKGROUND

An accurate and thorough description of the various depths and extent of ground disturbance that would be necessary to construct the various components of the proposed project is critical to a meaningful analysis of that project’s potential to effect cultural resources that may occur below the ground surface.

DATA REQUESTS

32. Staff requests that the applicant more clearly describe the depth and extent of ground disturbance anticipated in all portions of the project area of analysis, as indicated below:

Plant Site: Please indicate the maximum depth of ground disturbance anticipated for the construction of the plant site.

Laydown area: Please indicate the maximum depth of ground disturbance anticipated for the laydown area.

Natural Gas Pipeline: Please indicate the maximum depth and width of the trench to be excavated for the natural gas pipeline. In addition, please indicate precisely where the trench will be placed – down the center of the existing road, or along either side of the road? Will the pipeline occur entirely within the road’s right-of-way, or will it extend onto adjacent private property?

Transmission Line: Please indicate the maximum depth and width of the trench to be excavated for the portion of the transmission line that is proposed to be routed underground. Also, please describe the width and depth of any subsurface disturbance involved in the placement of the overhead power line (for instance, what is the extent of ground disturbance involved in the placement of the power poles?).

Sewer Pipeline, Storm Water Line, and Water Supply Line: Please depict the locations of the connections for these facilities on Figure 1-2, or provide an additional figure that depicts the locations of these connections, relative to the project site and the facilities to which they will be connected. Also, please indicate the maximum depth and width of the trenches to be excavated for these connections.

33. If any component of the proposed project's construction would result in subsurface disturbances greater than three feet (approx. one meter) below surface, please provide a report, based on the available Quaternary science and geoarchaeological literature, of the historical geomorphology of the project areas, including a description of the development of the landforms on which the project areas are proposed with a focus on the character of the depositional regime of each landform since the Late Pleistocene epoch. The discussion should include data on the geomorphology, sedimentology, pedology, hydrology, and stratigraphy of the project areas, and the near vicinity; relate landform development to the potential in the project areas for buried archaeological deposits; and include maps overlaying the above data on the project areas. The report must be prepared by a professional geoarchaeologist who, at a minimum, meets the U.S. Secretary of Interior's Professional Qualifications Standards for prehistoric archaeology, as published in Title 36, Code of Federal Regulations, part 61, and demonstrates the completion of graduate-level coursework in geoarchaeology, physical geography, geomorphology, or Quaternary science, or education and experience acceptable to cultural resources staff. Please submit the resume of the proposed geoarchaeologist for staff review and approval prior to implementation of the geoarchaeological analysis of the project areas. The report of the findings should be submitted to the Energy Commission under confidential cover.

34. In the absence of sufficient extant Quaternary science and/or geoarchaeological literature pertinent to the reconstruction of the historical geomorphology of the project area, as requested above, please have the approved geoarchaeologist design a primary geoarchaeological field study of the project areas, submit a research plan for staff approval, conduct the approved research, and provide a report of the findings. The primary study should, at a minimum, include the following elements:

A map of the present landforms in the project area at a scale of not less than 1:24,000; the data sources for the map may be any combination of published maps, satellite or aerial imagery that has been subject to field verification, and the result of field mapping efforts;

A sampling strategy to document the stratigraphy of the portions of the landforms in the project areas where the construction of the proposed project will involve disturbance at depths greater than 3 feet;

Data collection necessary for determinations of the physical character, the ages, and the depositional rates of the various sedimentary deposits and paleosols

that may be beneath the surface of the project areas to the proposed maximum depth of ground disturbance. Data collection at each sampling locale should include a measured profile drawing and a profile photograph with a metric scale, and the screening of a small sample (3 5-gallon buckets) of sediment from the major sedimentary deposits in each profile through ¼- inch hardware cloth. Data collection should also include the collection and assaying of enough soil humate samples to reliably radiocarbon date a master stratigraphic column for each sampled landform; and

An analysis of the collected field data and an assessment, based on those data, of the likelihood of the presence of buried archaeological deposits in the project areas, and, to the extent possible, the likely age and character of such deposits.

BACKGROUND

An integral part of the cultural resources analysis is a pedestrian survey of 100 percent of the project area of analysis to inventory cultural resources. The applicant states, "Due to private property restrictions (e.g., owner permission, fencing, gates, signage), a portion of the archaeological survey area was inaccessible for the intensive pedestrian survey. These areas included the northeast of the proposed transmission line corridors, as well as the entire proposed natural gas line corridor to the west" (Page 7-1 of the revised technical report, March 2011). The CHRIS record search identified a number of previously recorded archaeological sites adjacent to or within the un-surveyed portions of the project area of analysis. Staff needs the results of the pedestrian survey for the as yet un-surveyed portions of the project area of analysis to better understand the nature of the existing resources within the project limits and assess the project's likelihood to affect potentially significant archaeological sites. Staff is unable to provide a comprehensive cultural resources analysis until the results of the archaeological survey for all portions of the project area of analysis have been provided.

DATA REQUEST

35. Please complete the intensive pedestrian survey in those portions of the archaeological survey area that were not surveyed, due to previous private property access restrictions, and submit the results to staff as an addendum to the cultural resources technical report. Please provide documentation of attempts to gain access for those areas where access is still denied.

BACKGROUND

The degree of ground surface visibility during a pedestrian cultural resources survey is an important factor in the identification and/or relocation of archaeological resources and for developing a preliminary assessment as to the project's likelihood to affect potentially significant cultural resources. The applicant states, "Although archaeological resources were previously recorded within the survey area, the URS archaeological team identified no cultural resources within the project site, laydown area, transmission and underground gas line corridors, or within the survey buffer" (p.8-1 of the revised technical report, March 2011). However, as stated by the applicant in the methodology section of the report, "Overall visibility was poor over the bulk of the archaeological

survey area due to low growing vegetation. Visibility ranged from 5 – 10 percent on approximately 80 percent of the ground surface while the remaining ground surface had high visibility” (p. 7-3, revised technical report, March 2011). Results based on a visibility range of 5 – 10 percent over 80 percent of the project area does not provide staff with sufficient evidence to dismiss the previously-identified sites from the cultural resources inventory or to conclude that these sites would not be significantly affected by the project.

DATA REQUEST

36. Please either resurvey those areas of poor visibility when/if the vegetation cover permits improved surface visibility of mineral soil (at least 50 percent visibility), or develop and implement an alternative survey method (e.g., systematic surface scrapes along survey transects) that enables improved surface visibility of mineral soil (at least 50 percent visibility) within areas of dense ground cover to more accurately conclude whether or not cultural resources are present or absent within the project area of analysis. Please provide the results of the resurvey efforts or alternative survey method(s) in an addendum to the cultural resources technical report.

BACKGROUND

The locations and extent of prior disturbances within the project area of analysis is an important factor in assessing the integrity of any cultural resources identified. The applicant states, “It appears that those portions of the sites previously recorded within the PPEC archaeological survey areas have been mitigated by previous projects” (p. 8-1, revised technical report, March 2011). The applicant refers to a number of excavation reports that document the testing and/or mitigation that has occurred at sites whose boundaries overlap with the Pio Pico project area (p. 7-5 – 7-7, revised technical report, March 2011). However, there is no discussion about where the previous testing/mitigation work took place within the site areas, relative to the current Pio Pico project area. Nor is there any discussion of where the previous project construction (for which the testing/mitigation work was conducted) occurred relative to the current Pio Pico project area. Staff needs this information to assess the integrity of the area specifically within the project limits and for evidencing any conclusions drawn or decisions made regarding potential effects, or lack thereof, to cultural resources within the project area.

DATA REQUEST

37. For each archaeological site that occurs wholly or partially within the project limits, please provide evidence that describes/depicts where the previous test excavation and/or mitigation work occurred *relative to the current Pio Pico project limits*, as well as where the boundaries of the previous construction projects (for which the excavations were conducted) are located, *relative to the current Pio Pico project limits* (assuming this info is available in the reports cited from the literature search), in order to demonstrate if the portions of the previously recorded resources within the project area of analysis have, in fact, been mitigated and/or destroyed by previous projects, or if such work occurred outside the current project area of analysis.

Technical Area: Land Use
Author: Candace M. Hill

BACKGROUND

The Application for Certification (AFC) states that but for the Energy Commission's exclusive authority to license the project, the Pio Pico Energy Center (PPEC) would require the following land use action by the County of San Diego:

- A processing of a Major Permit to allow development of a power plant within the Heavy Industrial designation and Specific Plan zone.

Staff has made a direct inquiry via a letter to the County of San Diego requesting that the county provide the Major Permit findings it would make regarding PPEC and what conditions the county would attach to the project were it the permitting agency.

DATA REQUEST

38. Please provide the condition(s) the County of San Diego would attach to the Major Permit to allow development of a power plant within the Heavy Industrial designation and Specific Plan zone.

Technical Area: Socioeconomics
Author: Lisa Worrall

BACKGROUND: HOUSING

The project area for housing purposes is identified on page 5.10-2 of the Application For Certification (AFC) as including unincorporated San Diego County, and the cities of Chula Vista, Imperial Beach, National City, and San Diego. The AFC states on page 5.10-3 that San Diego County has one of the stronger hotel and lodging markets in the United States because of the county's popularity as a tourist and convention destination. The AFC also reports the project area has a total supply of 412,450 lodging rooms and was projected to have an average occupancy of 65.4 percent in 2009.

While hotel and motel availability is discussed in the AFC, there is no discussion on alternative lodging choices in the project area, such as recreational vehicle (RV) parks and campgrounds. So staff can analyze the potential project impacts related to the adequate supply of housing and lodging, additional information is needed, as identified below.

DATA REQUESTS

39. Please provide updated data (2010-2011) on the number of lodging rooms in the project area and average occupancy rate.
40. Please provide the names and number of available spaces at campgrounds and RV parks available for the project's use.

BACKGROUND: SCHOOLS

On page 5.10-17, the AFC states that the current statutory school fees in effect at the end of the 2009-2010 fiscal year applicable to new commercial or industrial development are \$0.19 and \$0.26 per square foot of covered and enclosed, non-residential space for the San Ysidro Elementary School District and Sweetwater Union High School District, respectively. According to the AFC, the statutory school fees would be charged based on the "chargeable covered and enclosed space", which is defined as the covered and enclosed space determined to be within the perimeter of the industrial structure during plan review prior to issuance of building permits.

DATA REQUESTS

41. Please provide an estimation of the total applicable square footage and calculated school impact fee for the project.

BACKGROUND: FISCAL RESOURCES

On page 5.10-16, the AFC states that new development is assessed a Fire Mitigation Fee, which would generate additional funding required by the San Diego Rural Fire Protection District fire protection needs, including the development of the planned new facility. The project would be assessed a fee of \$0.46 per square foot of covered and enclosed, non-residential space, based on the final design for construction prior to issuance of the project building permit. While Figure 3.1-3A, the Site Arrangement figure,

shows the layout of the facility, it is not clear that all of the covered and enclosed spaces are identified.

So that staff can report fiscal resources the project would generate and be assessed, additional information is needed, as identified below.

DATA REQUEST

42. Please provide an estimation of the total applicable square footage and calculated fire mitigation fee for the project.

Technical Area: Traffic and Transportation
Author: Kristin Ford

BACKGROUND

In the Traffic and Transportation section of the AFC (pg. 5.11-7), under 5.11.1.2, subsection Bus Routes and Transit Facilities, it is stated the “the Metropolitan Transit System (MTS) operates only one bus route within the East Otay Mesa Area. *MTS Route 905* does not directly serve the project site; the route originates from Iris Avenue Trolley Station, which stops at Otay Mesa Road & Heritage Road, Airway Road & Britannia Boulevard, Seimpre Viva Road & Drucker Land and its final destination at the Otay Mesa Border Crossing”.

DATA REQUEST

43. Please provide a map detailing the stops along MTS Route 905 and provide the distance in miles of the above mentioned roads from the project site

BACKGROUND

In the Traffic and Transportation section of the AFC (pg. 5.11-7), under 5.11.1.2, subsection Rail and Light Rail Facilities, there is a statement that “the Metropolitan Transit System (MTS) Trolley System’s Green and Orange Lines currently do not serve or reach the East Otay Mesa Area.

DATA REQUEST

44. Please describe the distance in miles, the above mentioned Green and Orange Line Stations are to the proposed project site.

BACKGROUND

In the Traffic and Transportation section of the AFC (pg. 5.11-7), under 5.11.1.2, subsection Airports, there is a statement that “two existing airports are currently operating around the vicinity of the PPEC project site. Brown Field is located approximately three miles due west and Tijuana’s Rodriquez International Airport is also located approximately three miles southwest of the PPEC project site”.

DATA REQUEST

45. Aerial photographs of the proposed site vicinity indicate an airfield north of the proposed project site named “John Nichols Field”. In addition, the airfield has a business called “Taking Off At Skydive – San Diego”. Please include a description of the orientation of the runway and traffic patterns for the John Nichols Field in the analysis of airports that are operating around the vicinity of the PPEC project site and any impacts to the airfield operations if the PPEC project site was to be built.

BACKGROUND

The applicant has recently submitted information regarding eliminating the Alta Road route for natural gas and moving it over one block to Enrico Fermi Drive.

DATA REQUEST

46. Please submit updated traffic counts for the new stretch of roadway. In addition, please verify the new route with adjacent streets included, if any.

BACKGROUND

As noted on page 5.13-5, the “Brownfield Airport is owned and operated by the City of San Diego. It is a general aviation airport used by local residents with small planes and is also a port-of-entry for private aircraft coming into the United States through Mexico”. It further states on page 5.13-5, “Although aircraft using the Brown Field Airport may fly over the project site, according to the Brown Field Airport Land Use Compatibility Plan, the PPEC site is not within a flight activity zone or area of influence”.

DATA REQUEST

47. Please provide information regarding the types of aircrafts, and the traffic/flight patterns of the Brown Field Airport. Please discuss if the U.S. Border Patrol uses the Brown Field Airport. In addition, please determine if the Brown Field Airport has existing/future skydiving and/or parachuting.

BACKGROUND

As noted on page 5.11-8, the issue of both visible and invisible thermal plumes from industrial stacks has lately been brought to the forefront regarding aviation safety. The AFC provides no discussion of potential plume impacts or analysis of plume velocity, heat dispersal, or other plume characteristics that might contribute to low altitude turbulence in AFC §5.0 (Traffic & Transportation). Analyses of the velocity, shape, and dispersal of the exhaust plumes are necessary for staff to determine the potential impact of plumes generated by the Pio Pico Energy Center on aircraft flying in the immediate vicinity of the project.

DATA REQUEST

48. Please provide a detailed plume analysis for the thermal plumes generated by the Pio Pico Energy Center exhaust stacks, including:

- a) Frequency of plume generation, velocity, shape, continuity, and dispersal of plume(s), up to and including 2000 feet agl.
- b) Meteorological impacts on plume formation and behavior. Provide the name of the computer model used and its inputs and outputs.
- c) Potential impacts to air mass stability and aircraft operations in the area affected by the plumes. Please consider elements such as aircraft type, speed, and altitude; low visibility; cool temperatures; and calm winds when evaluating potential aviation impacts.

BACKGROUND

The California Energy Commission received a letter dated March 18, 2011 from the City of San Diego (Docket # 60382) requesting "the analysis of traffic impacts on City facilities should be performed per the City of San Diego Traffic Impact Study Manual".

DATA REQUEST

49. Please provide an analysis of construction traffic impacts that may affect City of San Diego roadways during construction of the Pio Pico project site. Analysis should be consistent with the City of San Diego Traffic Impact Study Manual and any other applicable LORS, such as the City's circulation element.

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

BACKGROUND

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

The Supplement to the AFC indicated that the Phase I Interconnection Study for Pio Pico Energy Center (PPEC) project was completed and the report was issued on November 15, 2010. The Phase II Interconnection Study is underway.

DATA REQUEST

Staff requests the complete Phase I and/or Phase II Interconnection studies of the proposed 300 MW PPEC to proceed with the preliminary staff analysis.

50. Provide the California ISO Phase I and/or Phase II Interconnection Studies of the proposed 300 MW PPEC to the California ISO control grid. The Study should analyze the system impacts with and without the project during peak and off-peak system conditions, and demonstrate conformance or non-conformance with the utility reliability and planning criteria with the following provisions:
 - a. Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation.
 - b. Analyze the system for N-0, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation.
 - c. Analyze Short circuit duties.
 - d. Analyze the system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.
 - e. Provide a list of contingencies evaluated for each study.

- f. List mitigation measures considered and those selected for all criteria violations.
- g. Provide electronic copies of *.sav and *.drw PSLF files.
- h. Provide power flow diagrams (**MW, % loading & P. U. voltage**) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear. Provide the pre and post project diagrams only for an elements largest overload.

Technical Area: Visual Resources
Author: Melissa Mourkas, ASLA

BACKGROUND

The project parcel is located within the boundaries of the East Otay Mesa Specific Plan (EOMSP). EOMSP, Chapter Three, includes regulatory provisions for Site Planning Standards, Table 3.2-1, and Landscaping Standards, Table 3.2-2. These tables are found on pages 103-118 in the plan and outline site development standards, including but not limited to: Fencing, Walls and Hedges, General Landscape Notes, Building Setback Landscaping, Parking Lot Landscaping, Screening, Minimum Standards (including manufactured slopes steeper than 3:1) and Irrigation. Page 5.12-27 of the AFC notes that the PPEC will “work with both the County and the CEC to develop a landscaping plan in compliance with the Plan as the PPEC moves through regulatory review.”

DATA REQUEST

51. Provide a conceptual landscape plan for the project site addressing the Standards in Chapter 3 as noted above. Indicate on the plan how the project will meet the Site Planning Standards and Landscaping Standards of the East Otay Mesa Specific Plan identified above. The plan should be prepared at a standard measurable scale on an 11 x 17 sheet (or larger and should include the following:
- a) Specify fence and wall materials, and finishes on the plan;
 - b) Show plant selections in groups according to type, growth habit and placement;
 - c) Indicate individual trees on plan and include habit, purpose and whether evergreen or deciduous. Tree species may be identified but are not required;
 - d) Provide slope profiles expressed in ratio form and indicate on plan; and
 - e) Label setbacks, property lines, easements and show a north arrow and graphic scale.

BACKGROUND

The project parcel appears to be located in a High Fire Hazard Severity Zone of State Responsibility Area. (California Department of Forestry and Fire Protection-Cal Fire, http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_sandiego.php). State regulations pertaining to building in Fire Hazard Zones are found in Title 14, Natural Resources Division 1.5- Department of Forestry, Chapter 7- Fire Protection, Subchapter 2 SRA Fire Safe Regulations, Articles 1-5. Specifically, Article 5, Fuel Modification Standards, regulates setbacks, roads and defensible space on projects within a fire hazard area. Within Article 5, Regulation 1299 - Defensible Space, provides guidance for implementation of Public Resources Code 4291(a) and (b), and minimize the spread of fire within a 100 foot zone around a building or structure.

DATA REQUEST

52. Provide a discussion of how these regulations apply to the proposed project. If findings indicate the regulations apply, indicate on the conceptual landscape plan

where fire hazard setbacks are designated and how defensible space will be created as part of the landscape plan.

53. Provide a discussion of any local ordinances that apply to fire-hazard areas as they affect site design and landscaping. Incorporate these regulations, if any, into the conceptual landscape plan.

BACKGROUND

In consultation with Commission staff on-site on December 14, 2010, Key Observation Points (KOPs) were selected for the proposed project. KOP-4, found in the AFC as Figure 5.13-16 and -17, was intended to represent the view toward the project site from the intersection of Alta Road and Paseo de la Fuentes Road from the perspective of northbound motorists on Alta Road stopped at the traffic signal. This was confirmed by Commission staff on December 15, 2010 by e-mail and a sample photograph was included showing the viewpoint from within the traffic lanes of the roadway. The KOP-4 photograph of existing conditions and simulation submitted by the applicant provides a view of the project site from the perspective of a pedestrian standing on the southern sidewalk of Paseo de la Fuentes Road. This does not accurately reflect the motorist's view of the project site that was the objective. KOP-4 is the view that is most visible and will be seen by the highest number of viewers of any of the four KOPs. It may also have the most visual sensitivity of the four KOPs. It is important to have the KOP best represent the motorist's view, as motorists will by far outnumber the number of pedestrians viewing the project site from this position.

DATA REQUEST

54. Reproduce and resubmit KOP-4 Existing View and Simulated View to fully represent the motorist's perspective as discussed on-site. Staff has previously provided one sample photograph as a guide. This view should be from the travel lanes in the roadbed, not on the sidewalk.



Photograph e-mailed to URS staff on 12-15-10.

BACKGROUND

The East Otay Mesa Specific Plan provides Architectural Standards for Industrial Development (EOMSP Table 3.2-3). The standards address design features of buildings such as form, mass and texture, rooflines, entrances, windows, rooftop equipment, accessory buildings, outdoor storage areas and exterior building materials.

DATA REQUEST

55. Provide a discussion explaining how the proposed project meets (or does not meet) the standards as outlined in Table 3.2-3.

Technical Area: Soil & Water Resources
Authors: Abdel-Karim Abulaban, P.E., Marylou Taylor, P.E.

BACKGROUND

The Pio Pico Energy Center (PPEC) project proposes to meet all of its process water needs with recycled water, approximately 380 acre feet per year. Currently, recycled water is not available at the proposed PPEC project site, but Otay Water District (OWD) expects to expand its recycled water system to this area by June 2013. Construction of the PPEC is anticipated to begin in February 2013 and the estimated commercial online date is May 2014. Until recycled water can be delivered to the PPEC site, OWD has agreed to meet PPEC's near-term process water demands using potable water. In light of the State's and the Energy Commission's water policy, staff is concerned that any potential delays in the availability of recycled water would prolong the PPEC's dependence on potable water.

DATA REQUESTS

56. Please provide a copy of any signed agreement between OWD and the project applicant for the delivery of at least 380 acre-feet per year of recycled water.
57. Please provide an economic feasibility analysis that examines PPEC paying the upfront cost of installing the recycled water pipeline as planned by OWD, in the event that OWD is unable to fund the installation by the expected commissioning of the PPEC start of operations date. If the analysis meets the requirements for obtaining confidential designation, the applicant is welcome to submit this Data Response together with an application for confidentiality.

Technical Area: Worker Safety and Fire Protection
Author: Geoff Lesh

BACKGROUND

Fire protection services will be required for the project and will be provided by the San Diego Rural Fire Protection District (SDRFPD). As the construction of the project will increase the assets that the fire district must protect, Energy Commission staff requires assurance that SDRFPD's increased responsibility will not adversely affect, to any significant degree, its ability to continue to provide coverage to the public in its jurisdiction. Generally, development fees and taxes to be provided by the project to local government are sufficient to enable the local fire district to continue to maintain adequate emergency response readiness to serve both the project and the fire district's existing jurisdiction. Although rare, in some recent siting cases, project specific issues have occurred which required additional mitigation of unique impacts to the local fire district.

DATA REQUESTS

58. Please provide a letter or email from (or record of conversation with) SDRFPD that confirms the absence of any expected significant impacts on the local fire district from construction and operation of the proposed project, and states that SDRFPD will remain adequately equipped, staffed, and prepared to provide fire protection to both the project and the public if that is the case.
59. In the absence of such letter or communication, please provide a fire protection needs assessment and a fire risk assessment pursuant to NFPA 1710 guidelines that provides an objective estimate of both equipment and staffing shortfalls (if any) and the associated recommended mitigation (if any) that would be required to maintain sufficiency of SDRFPD's readiness to respond.