

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512



February 2, 2007

Donal O'Callaghan
Director of Light and Power
City of Vernon
4305 Santa Fe Avenue
Vernon, CA 90058

DOCKET	
06-AFC-4	
DATE	FEB 0 2 2007
RECD.	FEB 0 2 2007

Dear Mr. O'Callaghan,

VERNON POWER PLANT PROJECT (06-AFC-4) DATA REQUESTS

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.

This set of data requests (#49-59) is being made in the areas of air quality, public health, socioeconomics, and transmission systems engineering. Written responses to the enclosed data requests are due to the Energy Commission staff on or before March 5, 2007, or at such later date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both Chairman Jackalynne Pfannenstiel, Presiding Committee Member for the Vernon Power Plant Project, and to me, within 10 days of receipt of this letter. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 653-1245, or E-mail me at jreede@energy.state.ca.us.

Sincerely,

James W. Reede, Jr., Ed.D.
Energy Facility Siting Project Manager

Enclosure
cc: POS

PROOF OF SERVICE (REVISED 1-19-07) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 2-2-07
jg

**VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS**

Technical Area: Public Health

Author: Obed Odoemelum

BACKGROUND

Various epidemiological, clinical and SCAQMD studies show the background health risks from elevated levels of environmental pollution to be relatively high for the area around the proposed project which includes several densely populated communities (e.g., Maywood, Huntington Park, Southgate, and Commerce). The applicant noted in this regard (on pages 8.8-5 and 8.8-6 of the Application for Certification) that no additional housing is planned for the City of Vernon to reflect its pollution-related unsuitability for such purposes.

DATA REQUEST

49. Given the high incidence of pollution-related exposures in the cities (e.g., Maywood, Huntington Park, Southgate, and Commerce) in the project's immediate area, please provide a detailed assessment of the City of Vernon stationary source contributors to the high levels of the area's environmental pollutants.
 - a) Discuss whether the residential communities surrounding Vernon have a disproportionate level of health problems such as respiratory impairment/diseases when compared with the greater Los Angeles region.
 - b) Please identify studies of the public health problems in the surrounding communities of Maywood, Huntington Park, Southgate, and Commerce and identify those problems which could be exacerbated by the project's air emissions.
50. Please explain what mitigation would be undertaken to prevent further introduction of project-related pollutants at levels that could exacerbate the surrounding communities' health situation and cumulative impacts.

BACKGROUND

The South Coast Air Quality Management District's MATES-II report, dated March 2000, identified Huntington Park and adjacent communities as having the highest Cancer and Non-Cancer Risks in the air basin from toxic air contaminants from all sources (i.e., both stationary and mobile). The Hotspots Analysis and Reporting Program (HARP) health risk assessment in the AFC does not reflect information regarding the surrounding communities (e.g., Maywood, Huntington Park, Southgate, and Commerce).

DATA REQUEST

51. Please revise the HARP health risk assessment to reflect the potential impacts to the surrounding communities of Maywood, Huntington Park, Southgate, and Commerce.

**VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS**

**Technical Area: Transmission System Engineering
Author: Ajoy Guha, PE, Mark Hesters**

BACKGROUND

Staff needs to determine the system reliability impacts of the project interconnection and to identify the related support facilities needed. The interconnection must comply with the Utility Reliability and Planning Criteria, North American Electric Reliability Council (NERC) Planning Standards, NERC/Western Electricity Coordinating Council (WECC) Planning Standards, and California Independent System Operator (CAISO) Planning Standards. In addition the California Environmental Quality Act (CEQA) requires the identification and description of the “direct and indirect significant effects of the project on the environment.”

For compliance with planning and reliability standards and identification of indirect or downstream transmission impacts, staff relies on the System Impact and Facilities Studies as well as review of these studies by the agencies responsible for insuring the interconnecting grid meets reliability standards; in this case, Southern California Edison (SCE) and CAISO. The studies analyze the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the studies determine that the project will cause the transmission system to violate reliability requirements, the applicant and SCE identify, and CAISO approves, the potential mitigation options, or upgrades required to bring the system into compliance are identified.

After reviewing the System Impact Study (SIS) and its addendum dated November 15, 2006 performed by SCE and the Data Adequacy (DA) Response Supplements A & B dated August & September, 2006, staff observes the following:

SCE’s November 15, 2006 SIS, identified contingency (N-1) overloads on each circuit of the proposed new double circuit 230 kV interconnecting line between the VPP switchyard and the SCE Laguna Bell 230 kV substation for 914 megawatts (MW) full generation output from the VPP. A new interconnection in which the system could lose over 900 MW of the VPP generation when a single circuit is lost may compromise system reliability.

The short circuit study results indicate that thirteen circuit breakers in the SCE system would exceed fault duties due to the addition of the VPP, but there is no mention of the substations where the circuit breakers would need replacement or upgrades. Staff needs this information to assess the complete effects of the project, including system reliability impacts.

DATA REQUEST

52. Please identify the location of SCE substations where the circuit breakers would need replacement or upgrades required for the operation of the VPP and their expected installation date.

**VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS**

BACKGROUND

The SIS performed by SCE with 914 MW net generation output from the proposed VPP for 2009 summer peak and light spring system conditions identified the following new overloaded facilities under single contingency conditions:

- a. Vernon Power Plant-Laguna Bell 230 kV Line/Circuit #1.
- b. Vernon Power Plant-Laguna Bell 230 kV Line/Circuit #2.

These facilities are the interconnection of the proposed VPP to the existing transmission network and have been proposed in the AFC (Section 5.2.2.2, Figure 5.2-2) as a new double circuit interconnection line with 2-1033 kcmil 'Curlew' ACSR conductor.

DATA REQUEST

53. Please verify the thermal rating of each circuit of the proposed line under normal and emergency contingency conditions for full 914 MW generation output from the VPP.

BACKGROUND

The SIS performed by SCE with 914 MW net generation output from the proposed VPP for 2009 summer peak and light spring conditions identified the following SCE facilities where pre-project overloads under various contingencies are exacerbated by the addition of the VPP:

- a. Lighthipe-Mesa 230 kV line (for N-1 & N-2 contingencies).
- b. Hinson-Lighthipe 230 kV line (for N-2 contingencies).
- c. Hinson-Del Amo 230 kV line (for N-2 contingencies).
- d. Mesa-Redondo 230 kV line (for N-2 contingencies).
- e. Lighthipe-Long Beach 230 kV line (for N-2 contingencies).

DATA REQUEST

54. Please identify and describe the mitigation measures that would eliminate the overloads on each of the above lines and provide a report or letter from SCE documenting these mitigation measures. The description should include the SCE planned transmission project number, the expected date of operation, and whether or not the project has the CAISO approval.

BACKGROUND

The SIS provided by Commonwealth Associates includes a power flow analysis for system impacts in the LADWP area under 2009 normal and contingency conditions in the SCE system. It identifies several facilities in the LADWP area where the pre-project

**VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS**

overloads are exacerbated by the addition of the VPP. For example, the SIS results indicate the following overloaded facilities:

- a. St. John-Atwater 230 kV line (under normal conditions).
- b. Olympic-Tarzana 230 kV line (under normal conditions).
- c. Victorville 500/287 kV transformer (under N-2 contingencies).

The SIS results include the contingencies in the SCE system only and but does not identify mitigation measures for the overloaded facilities.

55. Please submit a complete power flow analysis report under normal and probable N-1 & N-2 contingencies in both the LADWP & SCE areas.
56. In consultation with LADWP, please provide a Short Circuit Duty study report for the LADWP area. The analysis is required to identify the system impacts in the LADWP area under 2009 summer peak and light spring system conditions due to interconnection of the 914 MW VPP at the existing Laguna Bell substation.
57. In the power flow analysis requested in Data Request #63, please verify the overloads on the facilities mentioned above and also verify the system impacts, if any, on the SCE system for probable contingencies in the LADWP system. For any identified reliability criteria violations in the LADWP area, provide respective mitigation measures with a report or approval letter from the LADWP and their expected on-line date.
58. Please provide power flow one-line diagrams for the LADWP area for base cases and detected overloads under N-1 & N-2 contingencies.

BACKGROUND

The SIS results for 2009 system conditions do not include the system impacts of the operation of 914 MW VPP on the 66 kV network of the City of Vernon. The AFC proposes the VPP interconnection to the Laguna Bell 230/66 kV substation which could impact the 66 kV network.

DATA REQUEST

59. Please provide a complete power flow analysis for the 66 kV system under 2009 summer peak and spring system conditions for normal base cases and probable N-1 & N-2 contingencies in the 66 kV and SCE systems. Provide power flow diagrams for the 66 kV system for base cases and for identified overloads under N-1 & N-2 contingencies. Also provide a Short Circuit Duty study report for the 66 kV network. For any identified reliability criteria violations in the 66 kV system, identify and describe mitigation measures with their expected on-line date.

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

APPLICATION FOR CERTIFICATION
FOR THE VERNON POWER PLANT PROJECT
BY THE CITY OF VERNON

DOCKET NO. 06-AFC-4
PROOF OF SERVICE LIST
(REVISED 1/19/07)

INSTRUCTIONS: All parties shall (1) file a printed, original signed document plus 12 copies OR file one original signed document and e-mail the document to the Docket address below, **AND** (2) all parties shall also send a printed OR electronic copy of the document, plus a proof of service declaration, to each of the entities and individuals on the proof of service list:

CALIFORNIA ENERGY COMMISSION
Attn: DOCKET NO. 06-AFC-4
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

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INTERESTED AGENCIES

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