

**CALIFORNIA ENERGY COMMISSION**

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512



August 8, 2007

Mr. George L. Piantka, PE  
NRG Energy Inc./El Segundo Power II LLC  
1819 Aston Avenue, Suite 105  
Carlsbad, CA 92008

**Subject: El Segundo Power Redevelopment Project (00-AFC-14C)  
Data Requests for Dry Cooling Petition – Set One**

Dear Mr. Piantka:

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the proposed modifications to the approved 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 is being made in the areas of air quality, biological resources, cultural resources, and worker safety/fire protection. Written responses to the enclosed data requests are due to the Energy Commission staff on or before September 10, 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, please send a written notice to me within 30 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (e)).

If you have any questions or comments, please contact me either by telephone at (916) 653-1639, or by e-mail at [cmeyer@energy.state.ca.us](mailto:cmeyer@energy.state.ca.us).

Sincerely,

**ORIGINAL SIGNED**

Christopher Meyer, Compliance Project Manager  
Energy Facilities Siting Division

Enclosure

cc: Chris Doyle, NRG Energy Inc.  
John A. McKinsey, Stoel Rives LLP  
Marc Kodis, NRG Energy Inc.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**Technical Area: Air Quality**

**Author:** Joe Loyer

**BACKGROUND: EMISSION REDUCTION CREDITS**

The applicant proposes to rely on the District's nitrogen oxides (NOx) RECLAIM program to offset the project's NOx emission impacts. The applicant has purchased sufficient emission reduction credits (ERCs) to offset the project emissions of volatile organic compounds (VOC) and sulfur dioxide (SO<sub>2</sub>). Finally, the applicant has purchased 24 lbs/day of PM10 ERCs as part of the due diligence requirements in District Rule 1309.1 (Priority Reserve). The applicant has not provided any information on how they intend to meet their RECLAIM and remaining PM10 ERC obligations.

**DATA REQUEST**

1. Please provide a list of NOx RECLAIM trading credits (RTCs) that the applicant owns or has under option contract.
2. Please update staff as to the status of securing the NOx RTCs and PM10 ERCs on a monthly basis through the period of staff review of the amendment request.

**BACKGROUND: NATURAL GAS SULFUR CONTENT**

The applicant indicates that the facility will use natural gas with a maximum sulfur content of 0.25 grains per 100 standard cubic feet (gr/100scf) for short term impacts (0.75 gr/100scf for long term). Staff has seen in previous licensing cases that pipeline grade natural gas can contain as much as 1gr sulfur/100scf. If higher sulfur content natural gas fuel is used at the facility, SOx and PM emissions may be underestimated, thus the project impacts may be underestimated and the project may be insufficiently offset. Therefore, staff needs additional information to assure that the sulfur content of the fuel does not exceed the levels stated in the petition to amend. The sulfur content of the natural gas is monitored by the natural gas supplier and such documentation would be useful. However, this monitoring is only useful if there are no intervening gas injection points between the monitoring site and the El Segundo site.

**DATA REQUEST**

3. Please provide specific documentation showing the sulfur content of the natural gas to be used on site.
4. Please provide documentation that there are no up-stream injection points between the pipeline gas monitoring site and the project site.
5. Please provide the steps the applicant would take to ensure that the natural gas that has higher than 0.25 gr/100scf of sulfur will not be used at the facility.
6. Please provide the method for ensuring continuous compliance with the sulfur content limits specified for the supplied natural gas fuel.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**BACKGROUND: CUMULATIVE ASSESSMENT**

It has been several years since the project applicant received a license from the California Energy Commission. The applicant now proposes to completely replace the original project with a project that has a different turbine manufacturer, operation profile and site configuration. While the applicant has provided sufficient modeling of the new proposed project, the applicant has not provided any cumulative assessment. It is staff's opinion that such dramatic changes in a project description and the intervening time between the original license and the present necessitate that a new cumulative assessment be performed.

**DATA REQUEST**

7. Please provide the documentation of new sources that are currently undergoing SCAQMD permit review, and those sources currently under construction within six miles of the proposed El Segundo Power Project site.
8. Please provide an estimated date of filing of the completed cumulative assessment.

**BACKGROUND: EMERGENCY FIREWATER PUMP EMISSIONS**

The applicant proposes to eliminate the engine for the firewater pump. In order to approve this petition, staff needs to understand what has changed since the original licensing that the applicant can do without this important and typical piece of emergency equipment.

**DATA REQUEST**

9. Please state the rational for why the El Segundo Power Project will not require a firewater pump.

**BACKGROUND: GREENHOUSE GAS EMISSIONS**

The State of California has identified through legislation and policy that greenhouse gas emissions are a significant concern to the health and well-being of Californians. Therefore staff believes it is necessary to ask for this information from this major industrial source.

**DATA REQUEST**

10. Please provide the estimated greenhouse gas emissions (in units of equivalent tons of CO<sub>2</sub> per year) from all emitting equipment on the proposed El Segundo Power Project site.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**Technical Area: Biological Resources**

**Author:** Marc Sazaki

**BACKGROUND**

The major amendment petition proposed for the El Segundo Power Redevelopment Project decision, Section 2.2.1 pages 2-13 thru 2-15, describes the delivery system for oversize plant equipment to the construction site across a state beach. In addition, Section 3.2.2.2 pages 3-17 thru 3-36 includes a description of the biological resources where the oversize equipment delivery system will be deployed and operated. Potential impacts on the biota where the delivery system will be located are described and possible mitigation measures are presented. Other mitigation activities for the project in general are also discussed in Section 3.2. To complete its analysis, staff needs additional information about sensitive biological resources that may be impacted by the beach delivery activities and the applicant's proposed mitigation measures.

**DATA REQUESTS**

1. Please indicate when the equipment delivery system will be installed to start the 3-6 month window for its operation. Please describe how this installation and operational period would correlate with the nesting or spawning of sensitive species potentially in the area during this period.
2. Please expand on the discussion about potential effects of sediment disturbance, suspension, and deposition in the intertidal and/or subtidal zones as it relates to barge delivery and the tug boat's prop wash. Please describe the likely position of the tug while pushing the barges into their respective locations and the timing of the work for this activity.
3. For proposed mitigation actions related to biological resources, please submit a draft Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Please use the following outline as a guide in preparing this plan. The following outline is intended as guidance in the preparation of the BRMIMP, and not all of the items will be applicable to this project. Contact Energy Commission staff if you have questions about the outline we have provided.
4. Please summarize any conversations you had with personnel of the U. S. Fish and Wildlife Service, California Department of Fish and Game, Department of Parks and Recreation, California Coastal Commission, and State Lands Commission regarding any potential biological resources issues or concerns (species or habitat) they felt needed to be considered for the proposed project.

BIOLOGICAL RESOURCES MITIGATION  
IMPLEMENTATION AND MONITORING PLAN  
(Recommended Outline)

- Note:**<sup>1</sup> The document should be submitted in a 3-ring binder that is 3” wide or wider.
2. The document font must be 10pt or larger.
  3. Show the version date in the upper right corner of each page.
  4. The document must have a table of contents that includes appendices by title and a list of figures.
  5. Any discussion, summary, or paraphrasing of the Conditions of Certification (Conditions) in this BRMIMP is intended as general guidance and as an aid to the user in understanding the Conditions and their implementation. If there appears to be a discrepancy between the Conditions and the way in which they have been summarized, described, or interpreted in the BRMIMP, the Conditions, as written in the final Decision, shall supersede any interpretation of the Conditions in the BRMIMP.

## 1.0 Introduction

### 1.1 Project description

- A. California Energy Commission (CEC) project ID and decision order number
- B. Project owner name, address, and phone/e-mail contact info
- C. Power plant capacity in MW and primary production technology
- D. Location by proximity to nearest noteworthy town or city
- E. Ancillary facilities
  1. Linear structures (T-lines, fuel lines, water supply lines, etc.)
  2. Sub-stations and/or compressor stations
- F. Generalized Maps and Figures showing location information (reference Tabbed section containing all project related detailed maps, diagrams, aerial photographs, and other visuals [titled “Maps and Figures”])

### 1.2 Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP)

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

- A. Condition(s) of Certification (COC) requiring BRMIMP (reference Tabbed section containing all COC's [titled "COC's"] verbatim as presented in CEC Decision)
- B. General Purpose of BRMIMP
- C. Briefly describe the purpose of a mitigation matrix (see attached example).

**2.0 Responsible Individuals for  
BRMIMP Implementation**

*2.1 Designated Biologist (DB)*

- A. DB name, work address, and phone/e-mail contact info (also to be printed on cover page of BRMIMP). Include resume in Tabbed section [titled "Resumes"] of BRMIMP.
- B. Basic duties as specified in CEC Decision COC's (reference Tabbed section containing all Biological Resources COC's [titled "COC's"] verbatim as presented in CEC Decision)

*2.2 Biological Monitor(s) (BM)*

- A. BM appointment process by DB
- B. Review and approval by CEC CPM
- C. Name(s), work addresses, and phone/e-mail contact info. Include resumes in Tabbed section of BRMIMP.

*2.3 Project's assigned Environmental Compliance Manager*

- A. name, work address, and phone/e-mail contact info
- B. description of responsibilities and working relationship with CEC CPM – define authority

*2.4 Non-CEC Responsible Agency Contacts*

- A. Federal (reference Tabbed section containing copies of any permits issued by agency [titled "Agency Permits and/or Authorizations"])
  - 1. names, work addresses, and phone/e-mail contact info
- B. State (reference Tabbed section containing copies of any permits issued by agency [titled "Agency Permits and/or Authorizations"])
  - 1. names, work addresses, and phone/e-mail contact info

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

- C. Local (reference Tabbed section containing copies of any permits issued by agency [titled “Agency Permits and/or Authorizations”])
  - 1. names, work addresses, and phone/e-mail contact info

*2.5 CEC Compliance Project Manager (CPM) Contact*

- A. name, work address, and phone/e-mail contact info.
- B. responsibilities
  - 1. verifies compliance with COCs – describe how documented
  - 2. approves changes in implementation methodology – describe process

**3.0 Pre-construction Surveys**

*3.1 For flora and fauna*

- A. First target species for biological survey (repeat for each targeted species)
  - 1. Names of field personnel
  - 2. Survey methods and/or protocol
  - 3. Report survey results by referring to separate Tabbed section (titled “Survey Results for [insert species name]”)
- B. Second target species
  - 1. Names of field personnel
  - 2. Survey methods and/or protocol
  - 3. Report survey results by referring to separate Tabbed section (titled “Survey Results for [insert species name]”)
- C. Next target species
  - 1. Names of field personnel
  - 2. Survey methods and/or protocol
  - 3. Report survey results by referring to separate Tabbed section (titled “Survey Results for [insert species name]”)
- D. Last target species
  - 1. Names of field personnel
  - 2. Survey methods and/or protocol
  - 3. Report survey results by referring to separate Tabbed section (titled “Survey Results for [insert species name]”)

*3.2 For habitat loss*

- A. Habitat supporting “x” species
- B. Amount of loss in acres

**4.0 Post-construction Activities**

*4.1 Habitat compensation recalculation*

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

A. Methodology

B. Results

1. Additional compensation if necessary
2. Refund if necessary

**4.2 Operational monitoring**

A. Methods

B. Reporting results

1. Report frequency
2. Report distribution

**5.0 Mitigation Implementation Matrix**

**5.1 Mitigation Matrix Including Sections with Fields for:**

A. CEC requirements (Bio conditions of certification)

1. Item designation or number and title/name
2. Target and goal briefly described
3. Implementation details summarization (refer to separate Tabbed section [titled "Mitigation Measure Details"]) where mitigation measures required to address specific impact issues are identified and described in detail as to how they will be implemented
4. Other non-CEC mitigation requirements that address this mitigation need; identify by permit and item number (this is a cross reference)
5. Brief description of verification
6. Brief description of performance or mitigation effectiveness criteria
7. Timing or performance schedule

B. Federal requirements under specific permit (identified)

1. Item designation or number
2. Title or name
3. Target and goal briefly described
4. Implementation details (refer to permit where mitigation measures required to address specific impact issues are identified and described in detail as to how they will be implemented)
5. CEC mitigation requirements considered satisfied; identify by COC number (this is a cross reference)
6. Brief description of verification
7. Brief description of mitigation effectiveness criteria
8. Performance timing

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

- C. State (other than CEC) requirements under specific permit (identified)
  - 1. Item designation or number
  - 2. Title or name
  - 3. Target and goal briefly described
  - 4. Implementation details (refer to permit where mitigation measures required to address specific impact issues are identified and described in detail as to how they will be implemented)
  - 5. CEC mitigation requirements satisfied; identify by COC number (this is a cross reference)
  - 6. Brief description of verification
  - 7. Brief description of mitigation effectiveness criteria
  - 8. Performance timing
  
- D. Local requirements under specific permit (identified)
  - 1. Item designation or number
  - 2. Title or name
  - 3. Target and goal briefly described
  - 4. Implementation details (refer to permit where mitigation measures required to address specific impact issues are identified and described in detail as to how they will be implemented)
  - 5. CEC mitigation requirements satisfied; identify by COC number (this is a cross reference)
  - 6. Brief description of verification
  - 7. Brief description of mitigation effectiveness criteria
  - 8. Performance timing

*5.2 Contact CEC Project Manager for Sample Mitigation Matrix Table*

*5.3 Mitigation Matrix Maintenance*

- A. Process for updating matrix
- B. Distribution of updates

## **6.0 Mitigation Implementation Timeline**

*6.1 Prepare Gantt chart similar to that which is prepared for overall project development*

*6.2 Describe methods for periodic updates and chart distribution*

## **7.0 Closure**

*7.1. Temporary*

- A. Indicate timing of Closure Plan submittal

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

- B. Describe steps to submit detailed Closure Plan
- C. Describe general measures
  - 1. Actions to protect wildlife and habitat
    - a. Prevent entry to ground-level sumps and vaults
    - b. Stabilize potential erosion sources
    - c. Other site-specific measures
  - 2. Monitoring
    - a. Methods
    - b. Reporting results
      - 1. Report frequency
      - 2. Report distribution

*7.2. Permanent*

- A. Describe general measures
- B. Describe steps to submit detailed Closure Plan
- C. Indicate timing of Closure Plan submittal

**8.0 BRMIMP Modification Procedures**

*8.1. Identify changes considered necessary*

- A. Describe proposed change
- B. Describe reasons for requested change
- C. Describe how change will be implemented

*8.2. Determine if CEC COC amendment is required*

- A. Contact CEC CPM
- B. Notify other Agencies and interested parties

EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS

APPENDICIES

**APPENDIX I - Worker Environmental Awareness Program (WEAP)**  
**[Prepare tabbed section titled “APPENDIX I – WEAP”]**

1.1. *Purpose of WEAP*

- A. Identify pertinent biological resource protective laws and ordinances
- B. Provide guidance for workers on site through an ongoing mitigation planning and implementation process

1.2. *Site specific factors to be covered in training*

- A. Project description
- B. Biological Resources associated with project site and vicinity
  - 1. Sensitive species and approximate locations
  - 2. Noteworthy life history factors of sensitive species and potential impacts
  - 3. Important habitat and associated species if present
- C. Guidelines for workers during construction activities
  - 1. Driving and parking vehicles
  - 2. Litter control (biological implications)
  - 3. Exclusion areas and demarcation methods
    - a. flagged areas and what flagging colors will be used and their meaning
    - b. features to avoid disturbing as much as possible
- D. Worker encounters with sensitive species
  - 1. what to do
    - a. do not approach
    - b. do not feed
  - 2. who and when to contact
- E. Reporting of conditions potentially harmful to biota
  - 1. petroleum or chemical spills
    - a. what to do
    - b. who to contact
  - 2. observed erosion or barrier failures
    - a. what to do
    - b. who and when to contact
- F. Items not allowed on site & reason as they relate to bio-resources
  - 1. firearms
  - 2. pets

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

- G. Information provided to workers during operational activities
  - 1. Required biological resource monitoring
  - 2. Location and function of remote sensing stations if deployed
    - a. individual responsibilities
      - 1. what to do
      - 2. who will supervise
    - b. reporting of equipment malfunctions or failures
      - 1. what to do
      - 2. who and when to contact

*1.3. Penalties for violations of biological resource laws, ordinances, regulations and standards*

- A. Penalties potentially levied against company
- B. Penalties potentially levied against individual

*1.4. Visual aids (include copies and/or samples)*

- A. Describe and include training video in VHS or DVD format
- B. Include samples of worker hand-outs
- C. Posters and/or signage
- D. Handouts

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**Technical Area: Cultural Resources**

**Author:** Dorothy Torres

**Please provide any documents under confidential cover that may reveal the location of an archaeological site.**

**BACKGROUND**

Page 3-46 of the Petition to Amend provides a discussion of a June 2, 2007 cultural resources field survey of the proposed 12.1 acre laydown/parking area at 777 W. 190<sup>th</sup> Street in the City of Gardena. Staff needs to know the qualifications of the survey personnel in order to assess the adequacy of the survey.

**DATA REQUEST**

1. Please identify the personnel who conducted the cultural resources survey, and discuss their qualifications and roles during the survey.

**BACKGROUND**

On page 3-37, the Petition to Amend describes the Santa Monica Bay as “an open embayment, characterized by a gently sloping continental shelf which extends seaward to the shelf break at water depths of approximately 265 ft.” On pages 2-13 to 2-14, the Petition to Amend describes the procedure for accomplishing six separate barge deliveries of oversize plant equipment. Each delivery of equipment would involve a delivery barge and a construction barge. The construction barge would be pulled onto the beach at high tide and a beach ramp would be constructed and attached to the construction barge. The California State Lands Commission Shipwreck Database identifies 156 shipwrecks off the coast of Los Angeles County. Shipwrecks may be considered a historical resource. The proposed mode of delivering equipment creates the potential for a delivery barge or construction barge to impact a shipwreck. To identify all project-related impacts, staff needs to know whether any shipwrecks are known in the area where the barges would be maneuvering during deliveries and what the draft of the barges would be. The Shipwrecks Database can be accessed at the following web address:

[http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks\\_Database.asp](http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp)

**DATA REQUESTS**

2. Please provide a discussion of the depth of the ocean from the El Segundo shoreline opposite the power plant and out to one mile. Please provide figures or a discussion on how deep each kind of barge would typically sit in the water. Include depths for the barges when loaded and not loaded.
3. Figure 3.6-1 includes two aerial photographs. On a scale similar to the scale used in the photograph at the top of the page, please identify the location of any known shipwrecks on a map or aerial photograph showing the area one mile offshore from the El Segundo project, and 0.5 mile along the shoreline north and south of the project site.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**BACKGROUND**

A discussion of beach preparation work is found on page 3-51. Twenty-five cubic yards of imported beach sand would remain and be used for restoration and improvements after conclusion of the Beach Delivery cycle. Unless they are commercial operations, borrow and disposal sites need to be surveyed for cultural resources.

**DATA REQUESTS**

4. Please provide documentation that any beach sand or fill soils used by the project would be obtained from a commercial location, and also provide documentation that excess soil removed from the project would be deposited at a commercial location.
  
5. If the proposed borrow or disposal sites have not been surveyed for cultural resources, please survey them and provide a technical report that includes personnel qualifications, methods, and findings.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C)-PETITION TO AMEND  
DATA REQUESTS**

**Technical Area: Worker Safety/Fire Protection**  
**Author: Dr. Alvin Greenberg**

**BACKGROUND**

The Request for Amendment states that the project will no longer include the “installation/operation of an emergency firepump Diesel engine”. Staff needs more information about emergency backup systems that would provide adequate water for firefighting from the new on-site storage tanks.

**DATA REQUEST**

1. Please provide a discussion of what systems will be installed and operated to provide water for firefighting if the City of El Segundo water mains are not functioning properly.

**BACKGROUND**

The Request for Amendment states that the project will install a “raw water storage tank” that will store single-pass RO quality reclaimed water and a third water tank to store demineralized water from the single-pass RO water tank for use in the plant steam cycle. Staff needs more information about the water quality to be stored in the new on-site storage tanks, their use, if the water meets tertiary treatment standards, and the potential for workers to come into contact with the water.

**DATA REQUEST**

2. Please provide a discussion of the water quality in each of the new tanks proposed, the proposed use of the water, if the water meets tertiary treatment standards, the potential for workers to come into contact with water not treated to tertiary standards, and the safety precautions and procedures to be followed by power plant employees if contact with raw, or secondary treated water occurs.