

## DOCKETED

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# Memorandum

**Date:** August 5, 2013  
**Telephone:** (916) 654-4781  
**File:** 00-AFC-14C

**To:** **Commissioner Karen Douglas** - Presiding Member  
**Commissioner Janea A. Scott** - Associate Member  
**Paul Kramer** - Hearing Officer

**From:** **California Energy Commission** - Craig Hoffman  
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**Subject:** **EL SEGUNDO ENERGY CENTER PETITION TO AMEND, (00-AFC-14C)**  
**TO REPLACE UTILITY BOILER UNITS 3 AND 4 WITH NEW GENERATION**  
**UNITS 9, 10, 11 AND 12**  
**ISSUES IDENTIFICATION REPORT**

Attached is staff's Issues Identification Report for the El Segundo Energy Center Amendment. This report serves as a preliminary scoping document that identifies issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Informational Hearing and Site Visit separately noticed by the assigned Committee for the project.

This report also provides staff's proposed schedule of events for the amendment process.

Attachment

cc: Docket 00-AFC-14C

# **EL SEGUNDO ENERGY CENTER AMENDMENT**

(00-AFC-14C)

## **ISSUES IDENTIFICATION REPORT**

**CALIFORNIA ENERGY COMMISSION**

**Siting, Transmission and Environmental Protection Division**

# **ISSUES IDENTIFICATION REPORT EL SEGUNDO ENERGY CENTER AMENDMENT**

(00-AFC-14C)

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# ISSUES IDENTIFICATION REPORT

## Energy Commission Staff Report

### PURPOSE OF THE REPORT

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This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of our discussions with federal, state, and local agencies, and our review of the Petition to Amend filed by El Segundo Energy Center, LLC on April 23, 2013.

The Issues Identification Report contains a project description, summary of potentially significant environmental and engineering issues, and a discussion of the proposed project schedule. The staff will continue to address the status of issues and progress towards their resolution in periodic reports to the Committee.

### PROJECT DESCRIPTION

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On April 23, 2013, El Segundo Energy Center, LLC (ESEC LLC) filed a petition with the California Energy Commission requesting to demolish and replace utility boiler Units 3 and 4 with one new combined cycle generator (Unit 9), one steam turbine generator (Unit 10) using dry cooling and two simple-cycle gas turbines (Units 11 and 12) for the El Segundo Energy Center (ESEC) project. This amendment would result in a total ESEC generating capacity of 1,022 MW gross.

The site is located at the southernmost city limit of the City of El Segundo on the coast of the Pacific Ocean, between Dockweiler State Beach and the City of Manhattan Beach, in Los Angeles County.

### Description of Proposed Modification

ESEC LLC, a wholly owned subsidiary of NRG Energy, Inc. (NRG), proposes to make substantial changes to the ESEC. Primary changes include the demolition and replacement of two once-through-cooled natural gas-fired utility boiler units (Units 3 and 4), with one new combined cycle generator (Unit 9), one steam turbine generator (Unit 10) and two simple-cycle gas turbines (Units 11 and 12). This change will eliminate the use of ocean water for once-through cooling at the facility. The proposed changes will also upgrade and improve the ESEC's existing and approved site infrastructure, provide fast start and dispatch flexibility capabilities to support Southern California grid load balancing and renewable energy integration, and implement improvements to coastal access.

Specific changes proposed through this Petition to Amend (PTA) include:

- Shutdown and demolition of Units 3 and 4;

- Removal and remediation of existing ESEC retention basins;
- Construction of a new, combined administration, maintenance, and operations support building;
- Modifications to existing site access; and
- Improvements to beach access.

The following new major equipment will be installed:

- (Unit 9) - One NRG fast start combined-cycle generator unit (CC Fast), rated at 222 MW net, incorporating a General Electric natural gas combustion turbine generator designed to achieve 75 percent of base load output in 10 minutes;
- One two-pressure, duct-fired heat recovery steam generator (HRSG) designed for rapid startup with conventional selective catalytic reduction system (SCR)/carbon monoxide (CO) catalysts;
- (Unit 10) - One single-case, non-reheat axial exhaust admission condensing steam turbine generator (STG) rated at 112 MW and designed for non-traditional elevated condensing pressure to minimize cooling system size;
- One Heller dry cooling tower system;
- (Units 11 and 12) - Two Rolls Royce Trent 60 generators, rated at 55 MW/unit net, consisting of advanced aeroderivative simple-cycle gas turbines; and
- One Cleaver Brooks auxiliary boiler consisting of a direct contact spray condenser and a mechanically-induced-draft dry-cooling tower.

## **Decommissioning**

In order for Units 9, 10, 11 and 12 to be constructed, Units 3 and 4 must cease operation and be removed. Unit 3 ceased operation on July 22, 2013 and Unit 4 must cease operation by December 31, 2015. Units 3 and 4 are structurally connected and decommissioning and demolition will not occur until Unit 4 ceases operation.

The applicant anticipates that Unit 4 will operate until December 2015 and will only cease operation earlier in order to allow for additional construction schedule time if needed.

## **Demolition**

Construction activities associated with the ESEC amendment include the demolition, and removal of existing Units 3 and 4 and will involve:

- Removal of any asbestos and hazardous materials.
- Demolition/heavy wrecking of Unit 3 and 4 structures.
- Pull down Units 3 and 4, elevation 20 foot - 90 foot (these are the main power plant structures and exhaust stacks).
- Demolish at grade and below grade concrete foundations.
- Crush onsite asphalt/concrete rubble.
- Mass haul asphalt/concrete and other demolition wastes.

Removal of existing Unit 3 and Unit 4 foundations will require excavations ranging from 5 to almost 20 feet deep. The deeper foundation removal excavations are located at the existing condensers and the cooling water pipes leading to the intake/discharge structure. It is anticipated that groundwater control will be provided for these excavations such that the base will be stable for placing structural fill. Structural fill will be brought up to the new power plant construction site working platform. Some new plant construction activities may take place prior to bringing up structural fill to the new site working platform. These activities may include ground improvement measures, deep foundation construction, constructing foundation mats, or laying the cooling water pipes.

## **Construction Schedule**

The entire construction schedule is anticipated to last approximately 26 to 28 months. The decommissioning, demolition, and removal of existing Units 3 and 4 is anticipated to take approximately 6 to 7 months. Following completion of site preparation activities, construction and startup of the ESEC from site mobilization to commercial operation is expected to take a minimum of 20 to 21 months.

The construction schedule is based on a double-shift through the site preparation period and the construction of the major equipment foundations and pedestals. This will be followed by a single-shift, 5-day workweek basis. Construction staff will range from 50 to approximately 422 construction workers.

## **Background**

Originally built in the 1950s, the ESEC was a 1,052-megawatt (MW) power plant consisting of four natural gas-fired utility boiler generating units. In 2000, the project owner applied to the Energy Commission to demolish and replace Units 1 and 2 with combined cycle Units 5, 6, and 7 and continue the use of once thru cooling. The project was certified by the Energy Commission on February 3, 2005. In 2007, the owner petitioned to amend the 2005 Decision to install smaller rapid start combined cycle units using dry cooling technology and designated as Units 5&6 and 7&8. The Commission approved this petition on June 30, 2010. NRG started construction on Units 5 – 8 in June 2011 and the project began commercial operation on August 1, 2013.

## **PUBLIC AND AGENCY COORDINATION**

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The Energy Commission amendment process includes a schedule that provides public comment and participation opportunities along with staff technical review and analysis. The Energy Commission seeks comments from and works closely with other regulatory agencies that administer laws, ordinances, regulations and standards that may be applicable to the proposed project.

During the review process of the amendment, staff coordination will include numerous local, state and federal agencies that have an interest in the project. Particularly, Energy Commission staff will be working with the Cities of El Segundo, Manhattan Beach, and Los Angeles; Los Angeles County; Los Angeles Regional Water Quality

Control Board;; South Coast Air Quality Management District; California Independent System Operator (Cal-ISO); California Air Resources Board; California Coastal Commission; California Department of Fish and Wildlife; California State Lands Commission; California Department of Parks and Recreation; U.S. Environmental Protection Agency; U.S. Fish and Wildlife Service; U.S. Army Corp of Engineers; and the Federal Aviation Administration to identify and resolve issues of concern. In addition, Commission staff will coordinate the review and analysis of the project with any intervenors and interested residents of the community.

Staff anticipates several public events that include: data response and issue resolution workshops, workshops on the Preliminary Staff Assessment, evidentiary hearings and a public hearing for the Commission decision. Public agencies and interested parties will be active participants in this process.

### **South Coast Air Quality Management District**

The South Coast Air Quality Management District (SCAQMD) is required under federal and state law, to protect public health through achieving and maintaining healthful air quality in the South Coast Air Basin. This is accomplished through the development and adoption of an Air Quality Management Plan which outlines how the area will attain state and federal ambient air quality standards. The SCAQMD develops and enforces air pollution control rules and regulations primarily for stationary sources in order to attain all state and federal ambient air quality standards and minimize public exposure to airborne toxins and nuisance odors. The SCAQMD issues permits to ensure compliance with air quality rules and regulations. SCAQMD will prepare an analysis of the ESEC project proposal that includes a Preliminary Determination of Compliance (PDOC) and a Final Determination of Compliance (FDOC).

Energy Commission staff utilize the local district analysis as part of our applicable laws, ordinances, regulations or standards (LORS) analysis. Since the SCAQMD is a local permitting agency, these conditions will be included in the Energy Commission staff air quality analysis and conditions of certification for the ESEC project. Energy Commission staff and SCAQMD are working closely together to ensure that the ESEC is appropriately conditioned consistent with federal and state air quality standards.

### **California Coastal Commission**

The ESEC project is located within the coastal zone and falls within the jurisdiction of the California Coastal Commission. In 2005, the Energy Commission and Coastal Commission entered into a Memorandum of Agreement to ensure timely and effective coordination between the Energy Commission and the Coastal Commission during the Energy Commission's review of an Application for Certification (AFC) of a proposed site and related facilities under Energy Commission jurisdiction. The goal of the agreement is to address any concerns regarding the proposed site and related facilities in order to meet the objectives of the California Coastal Act.

Energy Commission staff are working with the Coastal Commission staff to determine the level of their involvement in this amendment proceeding and to ensure their concerns are addressed as part of our review and analysis.

## **POTENTIAL MAJOR ISSUES**

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This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report may not include all of the significant issues that may arise during the case, since discovery is not yet complete, and any other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based on comments of other government agencies and on our judgment of whether any of the following circumstances could occur:

- Potential significant impacts which may be difficult to mitigate;
- Potential areas of noncompliance with applicable laws, ordinances, regulations or standards (LORS);
- Areas of conflict or potential conflict between the parties; and
- Areas where resolution may be difficult or may affect the schedule.

The following table lists all the subject areas evaluated and notes Air Quality as an area where potentially significant issues have been identified. Identification of an area as having no potential issues does not mean that an issue will not arise related to the subject area during the course of the amendment review process.

This report will not limit the scope of staff's analysis throughout this proceeding, but it acts to aid in the analysis of the potentially significant issues that the El Segundo Energy Center Amendment proposal poses. The following discussion summarizes the potential air quality issue, identifies the parties needed to resolve the issue, and suggests a process for achieving resolution. At this time, staff does not see this potential issue as non-resolvable.

The table on the following page lists all the subject areas evaluated and notes that Air Quality has currently identified a potentially significant issue. The table also indicates the subject areas in which staff, at the present time, expects to issue Data Requests (DRs). DRs in additional areas may become necessary as the case progresses.

Major Issues	DRs	Subject Area	Major Issues	DRs	Subject Area
Yes	Yes	Air Quality	No	Yes	Project Description
No	Yes	Alternatives	No	No	Public Health
No	Yes	Biological Resources	No	No	Reliability
No	Yes	Cultural Resources	No	Yes	Socioeconomics
No	No	Efficiency	No	Yes	Soils and Water Resources
No	No	Facility Design	No	Yes	Traffic and Transportation
No	No	Geological Hazards	No	No	Trans. Line Safety & Nuisance
No	No	Hazardous Materials Handling	No	No	Transmission System Design
No	No	Land Use	No	Yes	Visual Resources
No	No	Noise	No	Yes	Waste Management
No	No	Paleontological Resources	No	No	Worker Safety

DRs – Data Requests

## Air Quality

The project owner submitted an application to the South Coast Air Quality Management District (SCAQMD) in March 2013. Since that time, the applicant has been working with the SCAQMD to ensure that all the information necessary for a complete application is provided. The air district is currently working on its analysis of the project. The applicant and air district are actively working to have a Preliminary Determination of Compliance (PDOC) issued in November 2013 and a Final Determination of Compliance (FDOC) issued in April 2014. Since Energy Commission staff utilizes the PDOC and FDOC in their air quality analysis, the timing of the availability of these documents will impact the proposed schedule for producing an Energy Commission final decision. Staff will make sure that the ESEC Committee is aware of any modifications to air district timing that may impact the schedule.

## ENVIRONMENTAL JUSTICE

Based on the 2010 Census data, **63.4** percent of the total population living within the six-mile buffer of the El Segundo Energy Center site constitutes an environmental justice population.

Staff will review the impacts resulting from the construction and operation of the proposed project, to determine if minority or low-income populations would be significantly or adversely impacted. Staff is working with the Hearing Officer and Public Advisor to ensure that adequate public outreach and noticing takes place for workshops and document availability.

## **STATUS REPORTS AND CONFERENCES**

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Staff will provide monthly status reports beginning in November 2013 to keep the Committee and public apprised of the progress of the amendment review. Staff suggests that the ESEC Amendment Committee also hold regular status conferences to provide the Committee an opportunity to verify how the project is meeting any critical time frames and if the schedule is being met.

## **PROJECT SCHEDULE**

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On the following page is staff's proposed schedule for the key events of the project. The schedule includes some proposed dates and sets days of when items would be proposed to be completed after certain information is provided. Meeting the proposed schedule will depend on: the applicant's timely response to staff's data requests; determinations by other local, state and federal agencies; the submittal of required applications and approval of permits by federal agencies; and other factors not yet known.

## STAFF'S PROPOSED SCHEDULE

### El Segundo Energy Center Amendment - (00-AFC-14C)

ACTIVITY	DAY	DATE
Applicant files ESEC Petition to Amend	--	4/23/13
Staff files Notice of Receipt	--	5/14/13
Committee assigned		6/12/13
Staff files Issues Identification Report	--	8/5/13
Staff files data requests	--	8/9-12/13
Data Request Workshop (if needed)	--	8/13
Informational Hearing / Status Conference	--	8/13/13
Applicant provides data responses (last response)		9/13
Data Response and Issue Resolution Workshop		9/13
California Coastal Commission expected to file comments		11/13
<b>SCAQMD files PDOC</b>	<b>1</b>	<b>11/13</b>
Preliminary Staff Assessment published	30	
Preliminary Staff Assessment Workshop	45	
Preliminary Staff Assessment – 30 day comment period ends	75	
<b>SCAQMD files FDOC</b>	<b>1</b>	<b>4/14</b>
Final Staff Assessment published	30	5/14
Prehearing Conference*	TBD	
Evidentiary hearings*	TBD	
Presiding Members Proposed Decision (PMPD)*	TBD	
Committee Hearing on PMPD*	TBD	
Addendum/Revised PMPD	TBD	
Energy Commission Decision*	TBD	

\* The assigned Committee will determine this part of the schedule.