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<b>Table 3.1-6 Maximum Annual Gas Turbine Emissions (combined emission both gas turbines)</b>			
	<b>Previously Permitted Project<sup>a</sup></b>	<b>Proposed Project</b>	<b>Net Change</b>
<b>Pollutant</b>	<b>Tons/year</b>	<b>Tons/year</b>	<b>Tons/year</b>
<b>Normal Operation</b>			
NO <sub>x</sub>	123.8	72.7	-51.1
CO	75.4	66.4	-9.0
VOC	30.7	25.3	-5.4
SO <sub>x</sub>	11.9	6.9	-5.0
PM <sub>10</sub>	100.7	48.0	-52.7
<b>Startups/Shutdowns</b>			
NO <sub>x</sub>	29.2	18.3	-10.9
CO	18.3	127.7	109.4
VOC	0.9	5.4	4.5
SO <sub>x</sub>	0.4	0.6	0.2
PM <sub>10</sub>	4.0	3.8	-0.2
<b>Total Emissions</b>			
NO <sub>x</sub>	153.0	91.0	-62.0
CO	93.6	194.1	100.5
VOC	31.6	30.7	-0.9
SO <sub>x</sub>	12.4	7.4	-5.0
PM <sub>10</sub>	104.8	51.8	-53.0

<sup>a</sup>From September 2002 Final Staff Report for the El Segundo Power Redevelopment Project (00-AFC-14), Air Quality Table 12.

<b>Table 3.1-7 Comparison of Hourly CO Gas Turbine Emissions – Startups/Shutdowns (per gas turbine)</b>		
<b>Project</b>	<b>Gas Turbine</b>	<b>Startup/Shutdown CO Emissions (Lbs/hr)</b>
Proposed ESPR Project	Siemens SGT6-5000F	823
East Altamont Energy Center	GE 7FA	930 <sup>a</sup>
Metcalf Energy Center Project	Siemens 501F	2,500 <sup>b</sup>

<sup>a</sup>From Commission Decision for the East Altamont Energy Center (01-AFC-04), August 2003, COC AQ-14.

<sup>b</sup>From Commission Decision for the Metcalf Energy Center Amendment (99-AFC-3C), March 2005, COC AQ-11.



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- 6/19/2007 - Amendment petition filed with Energy Commission.

On June 19, 2007, El Segundo Power II, LLC (El Segundo) filed a petition with the California Energy Commission requesting to amend the Energy Commission Decision to eliminate the use of ocean water as the cooling water source for the El Segundo Power Redevelopment Project (ESPR). The petition proposes a new rapid response combined cycle (R2C2) design that will allow the project to operate without once-through cooling, along with changes to the previously approved laydown/staging areas and access routes. The 630 MW ESPR was originally certified by the Energy Commission at a special Business Meeting on December 23, 2004, but a second Business Meeting to consider errata was held on February 2, 2005. The decision, with errata, was certified on February 2, 2005. A petition challenging the certification was filed with the California Supreme Court shortly thereafter, thus delaying the effective date of the decision. With the Court's denial of the petition on August 31, 2005, the decision

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became final. The facility is located in the City of El Segundo in Los Angeles County.

El Segundo has proposed eliminating the use of ocean water as the cooling water source for the project by redesigning the facility to use fast-start turbines and dry-cooling. Additional changes have been proposed to the project, to support this change in design and to address a new laydown area and new equipment delivery options. The following is a list of the proposed changes to the project:

- Redesign the facility to replace the approved turbines and once-through cooling system with a R2C2 design and dry-cooling, changing the nominal plant capacity from 630 MW to 560 MW;
- Change the delivery method of oversize equipment to include ocean delivery over the beach and a new land route;
- Replace the previously approved Fed Ex laydown area (now developed) with a new laydown area at 777 W. 190th Street; and Modify the plant entrance road and gate area to allow the delivery of oversized equipment.

The Energy Commission is the lead agency under the California Environmental Quality Act (CEQA) and has a certified regulatory program under CEQA. Under its certified program, the Energy Commission is exempt from having to prepare an environmental impact report. Its certified program, however, does require environmental analysis of the project, including an analysis of alternatives and mitigation measures to minimize any significant adverse effect the project may have on the environment.

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## **2.0 Proposed Amendment to the Project Description**

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ESPR was certified by the CEC on February 2, 2005. ESPR was permitted as a nominally rated 630-megawatt (MW) combined-cycle facility located at the existing El Segundo Generating Station in El Segundo, California (Figure 2.0-1). ESP II is proposing several modifications to the previously permitted project, which requires an amendment to the permitted project design and related Conditions of Certification. The modifications are limited in scope and center around the following proposed changes:

1. Specification of different equipment and design to take advantage of state-of-the-art technology not available during siting of the previously permitted project (i.e., rapid response with combined cycle). The new R2C2 design will consist of two gas turbine generators (GTG), heat recovery steam generator (HRSG), and one steam turbine generator (STG) utilizing air cooled heat exchangers for cycle heat rejection. The R2C2 air cooled design will enable water/steam cycle wastewaters to be recycled back to the single-pressure RO water storage tank where they will be diluted for reuse as evaporative cooler makeup or reprocessed by mobile demineralizers. With the zero liquid discharge system, water/steam cycle wastewaters will be recycled and reused to the extent practicable eliminating once-through cooling at the site and eliminating discharge of water/steam cycle wastewaters. In addition, the modification of power delivery equipment will change the nominal plant capacity from 630 MW to 560 MW.
2. Different method of delivery of the oversize equipment to the plant including ocean delivery by barge over the beach using proven state-of-the-art technology and a new land route.
3. Addition of one new offsite laydown area and removal of a previously considered laydown area. The new offsite laydown area (referred to as "777 W. 190th Street") has ample space for component and equipment staging and parking for ESPR. One laydown area (Fed Ex) will be removed, because it is no longer available for staging or parking (i.e., the property has been redeveloped into a multi-level commercial building).
4. Modifications of the plant entrance road and gate area to enable delivery of oversize equipment to the plant during the construction phase of ESPR and to improve future equipment deliveries into the plant.

The benefits of these proposed modifications to ESPR are significant and include the following:

1. The use of the R2C2 technology eliminates the need for once-through cooling and the associated impingement and entrainment effects on marine resources.
2. Unprecedented rapid response design that provides comparable start-up rates to simple cycle units with the efficiency of a combined cycle power plant; specifically, each unit can deliver 150 MWs of capacity within 10 minutes of startup;