DOCKETED

Docket Number:	00-AFC-14C
Project Title:	El Segundo Power Redevelopment Project Compliance
TN #:	201382
Document Title:	Data to Supplement the Response to Data Request 56
Description:	N/A
Filer:	Dee Hutchinson
Organization:	Locke Lord LLP
Submitter Role:	Applicant Representative
Submission Date:	12/6/2013 3:10:15 PM
Docketed Date:	12/6/2013

Locke Lord LLP
Attorneys & Counselors

500 Capitol Mall, Suite 1800
Sacramento, CA 95814
Telephone: 916-930-2500
Fax: 916-930-2501
www.lockelord.com

John A. McKinsey
Direct Telephone: 916-930-2527
Direct Fax: 916-720-0443
jmckinsey@lockelord.com

December 6, 2013

VIA E-FILING

El Segundo Energy Center Petition to Amend (00-AFC-14C)
Craig Hoffman, Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: El Segundo Energy Center Petition to Amend (00-AFC-14C)
Data to Supplement the Response to Data Request 56

Dear Mr. Hoffman:

On November 15, 2013, California Energy Commission staff requested additional data to supplement El Segundo Energy Center LLC's ("**ESEC LLC**") response to Data Request 56. Accordingly, ESEC LLC submits the enclosed air quality information to supplement its Data Response 56. Please contact me or my colleague Allison Harris if there are questions about the enclosure.

Locke Lord LLP

By: _____
John A. McKinsey
Attorneys for El Segundo Energy Center LLC

JAM:awph

Enclosure

El Segundo Energy Center
Petition to Amend

(00-AFC-14C)

Supplemental Data Regarding CEQA Cumulative Air Quality Impacts

Submitted to

California Energy Commission

Prepared by

El Segundo Energy Center LLC

With Assistance from

Sierra Research
1801 J Street
Sacramento, CA 95811

December 5, 2013

CEQA Cumulative Air Quality Impacts

In the August 12, 2013 Data Request Set 1 (Nos. 1 - 83) for the El Segundo Energy Center Amendment Petition to Amend (00-AFC-14C) (the "**Proposed Project**"), the California Energy Commission ("**CEC**") Staff requested that the El Segundo Energy Center LLC ("**ESEC LLC**") perform a cumulative modeling analysis as part of Data Request Number 56:

DATA REQUEST

56. Please provide a modeling analysis showing that the impacts from the entire El Segundo facility and the nearby facilities with greater than 5 tons per year of emissions of any single criteria pollutant are not cumulatively significant. These nearby facilities may include but not limited to: SO CAL GAS CO/PLAYA DEL REYSTORAGE FACI (8582), AIR LIQUIDE LARGE INDUSTRIES U.S., LP (148236), GARRETT AVN. SVCS. LLC DBA STANDARD AERO (155828), DIGITAL 2260 EAST EL SEGUNDO, LLC (166388), FIRST CHURCH OF GOD OF LOS ANGELES (168886), T5@ LOS ANGELES, LLC (169168), CHEVRON PRODUCTS CO. (800030), LA City Dept. of Airports (800335), United Airlines Inc. (9755), Northrop Grumman Systems Corp. (800409), Hollywood Park Land Co. (145829), new units at LADWP Scattergood Generating Station (800075), and new units at AES Redondo Beach (115536).

Response: In the modeling protocol for the Proposed Project, which was submitted to the CEC in November 2012 (a copy of this modeling protocol was included in the April 2013 PTA, Appendix 3.1C), ESEC LLC describes the approach that would be followed for the cumulative air quality impact analysis for California Environmental Quality Act ("**CEQA**") purposes (see Section 3.10 of the modeling protocol). The key elements for the identification of stationary sources to include/exclude from the analysis are:

- Identify stationary source emissions sources located within a six-mile radius of the Proposed Project that have received construction permits since January 1, 2011, or are in the permitting process; and
- For each criteria pollutant, a stationary source identified above having an emission increase of less than five tons per year will be considered *de minimi*s, and will be excluded from the cumulative air quality impact analysis.

No comments from the CEC staff were received in response to this protocol. This approach was followed by ESEC LLC, and the results of this analysis are discussed in Section 3.1.5.1 of the April 2013 PTA. As discussed in that section of the PTA, all of the projects identified by the South Coast Air Quality Management District (the "**SCAQMD**") (i.e., those with permits issued and/or in the permitting process since January 1, 2011) were eliminated from further review for one or more of the following reasons:

- Project was a new source with emissions below 5 tons per year,
- Project was a change of ownership (therefore no increase in emissions),
- Project was an administrative permit change (therefore no increase in emissions),
- Project was a change of conditions for an existing source with an emission increase below 5 tons per year.

A detailed summary of the projects provided by the SCAQMD along with the reason the projects were eliminated from further review for purposes of a CEQA cumulative air quality impact analysis is included in Appendix 3.1H of the April 2013 PTA. It should be noted that this same approach for determining which nearby stationary sources to include/exclude from a CEQA cumulative air quality impact analysis has been followed for several power plant projects reviewed by the CEC.

It is important to understand that the approach used to identify stationary sources to include/exclude from a CEQA cumulative air quality impact analysis is different than that used for a 1-hour NO_2 impact analysis performed for the purposes of the Prevention of Significant Deterioration ("**PSD**") regulations. The CEQA cumulative air quality impact analysis focuses on identifying/analyzing reasonably foreseeable *new* stationary sources, or facility modifications, in a project area because these *projects* would not be included in the background conditions discussed in the air quality environmental setting section of either the Petition to Amend or Application for Certification (depending on the project in question), and the combined impact of these projects could arguably result in a cumulatively significant change in the environment. In contrast, for a PSD 1-hour NO_2 impact analysis the EPA requires the identification of nearby stationary sources that may not be adequately represented by NO_2 1-hour data collected by nearby ambient monitoring stations, which may include both existing and new sources.

With respect to which pollutants to include in a CEQA cumulative air quality impact analysis for the Proposed Project, normally CO and SO_2 are not included in a CEQA cumulative air quality analysis because the impacts of these two pollutants from a project, when added to background levels, are well below the most stringent state/federal ambient air quality standards. This is the case with the Proposed Project. Its facility-wide impacts, meaning the proposed new units plus existing sources at the facility, along with background levels remaining well below the most stringent state/federal ambient air quality standards (38% of most stringent SO_2 standard, 26% of most stringent CO standard).[1] Therefore, ESEC LLC does not believe it is necessary to perform a CEQA cumulative air quality impact analysis for these two pollutants. It should be noted that this same conclusion regarding eliminating CO and SO_2 from the CEQA cumulative air quality impact analysis because their impacts are well below the most stringent state/federal ambient air quality standards is consistent with CEC analyses in other, similar proceedings.

As shown below in Table 56-1, the maximum impacts for the *entire facility* including Units 5 and 7—not just the Proposed Project—remain below the federal significant impact levels ("**SILs**") for CO and SO_2. The primary purpose of federal SILs is to identify a level of ambient impact that is sufficiently low relative to an ambient air quality standard or increment such that the impact can be considered trivial. Hence, EPA considers a source whose individual impact falls below a SIL to have a *de minimis* impact on air quality concentrations that already exist. If a project's impacts are below a federal SIL, these impacts are not considered to cause or contribute to a violation of an ambient air quality standard and/or increment.[2] Consequently, since the facility's CO and SO_2 impacts are below federal SILs, ESEC LLC believes the impacts for the *Proposed Project* are *de minimis* and there is no need to perform a further CEQA cumulative analysis for these two pollutants.

Regarding the CEQA cumulative air quality impacts for PM_{10}, as with CO and SO_2, the maximum PM_{10} impacts the entire facility including Units 5 and 7 – not just the Proposed Project – are below the federal SILs for 24-hour and annual impacts (see Table 56-1 below). Therefore, ESEC LLC believes the PM_{10} impacts are *de minimis* and there is no need to perform a further CEQA cumulative analysis for this pollutant.

For $PM_{2.5}$ the maximum impacts for the entire facility including Units 5 and 7—not just the Proposed Project—are above the federal SILs for 24-hr and annual impacts. The distance to the maximum 24-hr $PM_{2.5}$ modeled impact is approximately 140 meters beyond the facility fenceline, and the distance to the maximum annual $PM_{2.5}$ modeled impact is approximately 320 meters beyond the facility fenceline. The only two new projects within 6 miles of the Proposed Project with emission increases greater than 5 tons/year for any criteria pollutant are the new units at the LADWP Scattergood Generating Station, and new units at AES Redondo Beach. The LADWP Scattergood Generating Station is located approximately 650 meters to the

[1] ESPFM submittal to CEC, Data Response Set 1A, September 23, 2013, Table 3.1-29R (revised September 23, 2012), facility-wide 1-hour SO_2 total impact of 75.1 µg/m3 vs. 196 µg/m3 federal standard, facility-wide 8-hr CO total impact of 2,628 µg/m3 vs. 10,000 µg/m3 federal/state standards.

[2] 75 FR 64891: "Accordingly, a source that demonstrates that the projected ambient impact of its proposed emissions increase does not exceed the SIL for that pollutant at a location where a NAAQS or increment violation occurs is not considered to cause or contribute to that violation."

north of the Proposed Project fenceline and the AES Redondo Beach facility is located approximately 6,400 meters to the south of the Proposed Project fenceline. Due to the large distance from the Proposed Project to the AES Redondo Beach facility, any overlap between $PM_{2.5}$ impacts are expected to be minimal.

With regards to the new units at the LADWP Scattergood Generating Station, these new units are similar to the new units associated with the Proposed Project (a single combined cycle gas turbine and two peaking gas turbines). Therefore, the $PM_{2.5}$ impacts from the new units at the Scattergood Generating Station are expected to be similar to those of the Proposed Project both in terms of the maximum impact value and distance to maximally impacted receptors. As discussed above, the distance to the maximum modeled 24-hour $PM_{2.5}$ impact is approximately 140 meters and that to the maximum modeled annual $PM_{2.5}$ impact is approximately 320 meters. Given that these maximum impacts are the same order of magnitude as the $PM_{2.5}$ SILs, and because the two facilities are approximately 650 meters apart, ESEC LLC expects very little overlap between the $PM_{2.5}$ significant impact areas for the two projects (areas with impacts above $PM_{2.5}$ SILs).

As shown on Table 56-1, the NO_2 annual average impacts from the entire facility (including the Proposed Project) are below the federal SIL. Therefore, with regards to annual NO_2 impacts, ESEC LLC believes the impacts are *de minimis,* and there is no need to perform a further CEQA cumulative analysis for this pollutant/averaging period.

For 1-hour NO_2 impacts, as shown on Table 56-1, the maximum modeled impacts for the Proposed Project are above the federal SIL for this pollutant/averaging period. ESEC LLC performed a 1-hour NO_2 cumulative impact analysis that included several new or existing facilities in the project area, including the new units at the LADWP Scattergood Generating Station and at the AES Redondo Beach facility.[3] For this analysis, it was assumed that the existing El Segundo Energy Center Units 5 and 7 were operating at normal levels and proposed new Units 9, 11, and 12 were all undergoing startups simultaneously. As discussed in the analysis, while it is unreasonable to assume that all three new units are undergoing a startup simultaneously given the different grid dispatch characteristics of the units, the analysis was performed using this assumption because SCAQMD requested it. For this worst case operating case, it was assumed that the auxiliary boiler was not operating because the operating case (all three new units in startup) already resulted in an overestimation of modeled 1-hour NO_2 impacts.

The analysis showed both maximum 1-hour NO_2 impacts (state standard) and maximum 8th highest daily hourly NO_2 impacts (federal standard) for the Proposed Project and the other new/existing facilities in the project area. With respect to the federal 1-hour NO_2 standard, this analysis concludes that the highest contribution from the Proposed Project to a modeling receptor with a combined modeled impact (impact for all projects modeled in analysis) above the federal 1-hour NO_2 standard was approximately 3.4 $\mu g/m^3$, which is below the federal SIL of 7.5 $\mu g/m^3$. Therefore, the Proposed Project will not cause or contribute significantly to an exceedance of the federal 1-hour NO_2 standard.

A similar conclusion can be reached regarding the 1- hour state NO_2 standard (339 $\mu g/m^3$). A review of the modeling files submitted as part of the November 7, 2013 analysis shows that there is no overlap between the modeled receptors with a combined modeled impact (impact for all projects modeled in analysis) above the state 1-hour NO_2 standard and the receptors with Proposed Project modeled impacts above the federal SIL of 7.5 $\mu g/m^3$. Consequently, the Proposed Project will not cause or significantly contribute to an exceedance of the 1-hour state NO_2 standard.

In Data Request Number 56, the CEC staff also requested that several smaller new/modified emission sources (emissions less than 5 tons/year) located within 6 miles of the Proposed Project be included in the CEQA cumulative impact analysis. As discussed above, pursuant to the modeling protocol submitted to the CEC for the Proposed Project and as allowed by the CEC for other similar power plant projects, nearby new

[3] Sierra Research submittal to SCAQMD, El Segundo Power Facility Modification Project (Facility ID 115663), November 7, 2013.

or modified projects with emission increases of less than five tons per year were considered *de minimis*, and excluded from the CEQA cumulative air quality impact analysis. In addition, because many of these smaller new or modified emissions sources identified by the CEC staff are emergency engines, this equipment will only operate intermittently. Pursuant to EPA modeling guidance for the federal 1-hour NO_2 standard, the EPA cautions against including intermittently operated nearby sources in a 1-hour NO_2 modeling analysis because it is doubtful that these sources will be operating at the same time as the primary source(s) being modeled.[4] For these reasons, as well as the fact that for many pollutants/averaging periods, the Proposed Project's impacts are below federal SIL values, ESEC LLC does not believe it is necessary to include these smaller new or modified emission sources in a CEQA cumulative impact analysis.

TABLE 56-1
Maximum Facility Impacts
El Segundo Energy Center Project

Pollutant	Averaging Period	Maximum Facility Impacts[5] ($\mu g/m^3$)	Federal SIL[6] ($\mu g/m^3$)
NO_2	1-hr	54.8	7.5
	Annual	0.6	1
SO_2	1-hr	7.5	7.8
	3-hr	3.1	25
	24-hr	0.5	5
CO	1-hr	252	2000
	8-hr	195	500
PM_{10}	24-hr	1.8	5
	Annual	0.4	1
$PM_{2.5}$	24-hr	1.8	1.2
	Annual	0.4	0.3

[4] Tyler Fox memorandum, "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard," March 1, 2011, page 10.

[5] ESPFM submittal to CEC, Data Response Set 1A, September 23, 2013, Table 3.1-29R (Revised September 23, 2013), modeled maximum impacts for entire facility (including existing Units 5 and 7, proposed new Units 10, 11, and 12).

[6] With exception of 1-hour NO_2 and SO_2 SILS, from 40 CFR 51.165(b)(2). For 1-hour NO_2 and SO_2 SILS, EPA has not yet defined significance levels for 1-hour NO_2 and SO_2 impacts. However, EPA has suggested that until SILs have been promulgated, interim values of 4 ppb (7.5 $\mu g/m^3$) for NO_2 and 3 ppb (7.8 μg/m3) for SO_2 may be used (USEPA (2010c); USEPA (2010d)).