

*Note: the non-electronic version of this attachment contains additional original information that was not available electronically.*

**EL SEGUNDO POWER REDEVELOPMENT  
APPLICATION FOR CERTIFICATION**

**ERC INFORMATION**

**ENCLOSURE A  
(Non-Confidential)**

**OVERVIEW**

The quantities of emission reduction credits required for the project are presented in Table 1.

**TABLE 1  
SUMMARY OF OFFSET REQUIREMENTS**

<b>Unit</b>	<b>CO (lbs/day)</b>	<b>SOx (lbs/day)</b>	<b>ROG (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
Net Increase from Gas Turbines/HRSGs	686	78	253	678
Offset Ratio	1.2:1	1.2:1	1.2:1	1.2:1
Offsets Required	823	94	304	813

ESP II proposes to fulfill offset requirements by the following methods:

- Generate credits from the Shutdown of Units 1 and 2
- Purchase of existing credits through the use of a third-party broker
- Interpollutant transfers
- Generate credits from an enhanced street-cleaning program, and
- Generate credits from existing Stationary Sources.

Some information pertaining to the generation of credits from enhanced street cleaning and generation of credits from existing stationary sources is still considered confidential. The reasons for this are explained in the Application for Confidential Treatment of the confidential enclosure to this attachment.

**1) GENERATION OF CREDITS FROM UNITS 1 AND 2**

The generation of credits from Units 1 and 2 is discussed in detail in the Application for Certification for ESPR. This information is not confidential. For the sake of brevity, the calculation methodology is not repeated in this text. The quantity of credits that will be generated is shown in Table 2.

**TABLE 2**

**SUMMARY OF OFFSETS GENERATED BY UNITS 1 AND 2**

<b>Source</b>	<b>CO (lbs/day)</b>	<b>SOx (lbs/day)</b>	<b>ROG (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
Units 1 and 2	1600	11	105	145

**2) PURCHASE OF EXISTING CREDITS THROUGH THIRD-PARTY BROKERS**

The acquisition of credits from a third party broker is discussed in detail in the Application for Certification for the ESPR. ESP II has entered into binding agreements for credits obtained from a third party broker. Applications have been filed with the SCAQMD to transfer the credits into the name of NRG Energy and will be used to offset emissions for the ESPR. Sufficient credits were purchased to satisfy the ROG and SOx offset requirements. ESP II is also negotiating to acquire NOx ERCs that are proposed to be used as an interpollutant trade for PM<sub>10</sub>. Table 3 summarizes the quantity of credits that ESP II has purchased at this time. Table 4 indicates confidential sources still being negotiated at this time.

**TABLE 3**

**CREDITS PURCHASED OR OBTAINED UNDER BINDING CONTRACT**

<b>Source Cert. No.</b>	<b>Location</b>	<b>Status</b>	<b>NOx (lbs/day)</b>	<b>CO (lbs/day)</b>	<b>SOx (lbs/day)</b>	<b>ROG (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
Allied Signal Inc.	Commerce	N				33	
National Offsets	Torrance	N				47	
National Offsets	Torrance	N				50	
National Offsets	Torrance	N				70	
ARCO	Commerce	N			245		
Aerochem	Orange	N					6
Honeywell	North Hollywood	N				241	
<b>Total Available</b>					<b>245</b>	<b>441</b>	<b>6</b>

**TABLE 4****CREDITS UNDER NEGOTIATION OR BEING DEVELOPED**

Source Cert. No.	Location	Status	NO <sub>x</sub> (lbs/day)	CO (lbs/day)	SO <sub>x</sub> (lbs/day)	ROG (lbs/day)	PM <sub>10</sub> (lbs/day)
Confidential Source #1	Conf.	U	70				
Confidential Source #2	Conf.	U	157				
Confidential Source #3	Conf.	U		44	13	297	16
Confidential Source #4	Conf.	D					700
Street cleaning enhancement	Conf.	D					1674
Total confidential credits			227	44	13	297	2340

Status codes:

- P: ERCs have been acquired through a purchase agreement
- N: ERC final purchase pending, binding contracts have been signed
- U: ERC under negotiation
- D: ERC being negotiated and under development.

Tables 2, 3 and 4 shows that ESPR has obtained or has under development or negotiation more than sufficient ERCs to fulfill the offset requirements for ESPR. Because PM<sub>10</sub> involves sources still under negotiation or development, ESPR also intends to apply for interpollutant transfers of excess SO<sub>x</sub>, VOC and for NO<sub>x</sub> to PM<sub>10</sub>.

**3) INTERPOLLUTANT TRANSFERS**

Interpollutant transfer of credits is discussed in the application for certification. ESP II has purchased and is developing excess SO<sub>x</sub> and VOC credits and intends to perform an interpollutant transfer of these credits for PM<sub>10</sub>. ESP II has also purchased and is developing NO<sub>x</sub> emission reduction credits and intends to transfer these credits for PM<sub>10</sub>. It is understood that the SCAQMD is considering the development of basin-wide trading ratios for NO<sub>x</sub>, VOC and SO<sub>x</sub> for PM<sub>10</sub>. For the purposes of this attachment, ESPR has assumed a trading ratio of 2:1. Table 5 summarizes the interpollutant transfers proposed.

**TABLE 5****SUMMARY OF OFFSETS GENERATED  
THROUGH INTERPOLLUTANT TRANSFERS**

Source	NO <sub>x</sub> (lbs/day)	CO (lbs/day)	SO <sub>x</sub> (lbs/day)	ROG (lbs/day)	PM <sub>10</sub> (lbs/day)
SO <sub>x</sub> for PM <sub>10</sub> Transfer			(175)		87
VOC for PM <sub>10</sub> Transfer				(539)	269
NO <sub>x</sub> for PM <sub>10</sub> Transfer	(227)				113.5
Total Available					469.5

#### 4) ENHANCED STREET-CLEANING

ESP II is proposing an enhanced street-cleaning program for several cities near the project site to obtain any remaining PM<sub>10</sub> credits required for the ESPR Project. This program entails sweeping the traffic lanes with high-efficiency vacuum sweepers that will help to remove the roadway silt that becomes entrained in the air due to vehicle traffic. Enhanced street cleaning would supplement existing city programs that sweep only the curb lane. ESPR II understands that the California Air Resources Board (ARB) will not object to the use of PM<sub>2.5</sub> removed from enhanced street-cleaning programs as an offset for PM<sub>10</sub> from combustion sources.

ESP II has approached several cities near the Project site to discuss the possibility of implementing an enhanced street-cleaning program. The program is mutually beneficial for both ESP II (for creating emissions offsets) and the cities (for meeting urban stormwater requirements). ESP II has requested that each city sign a Memorandum of Understanding (MOU) that states their intent to work with ESP II towards the implementation of this program. The actual identities of the cities and completed MOUs need to remain confidential at this time pending development of these sources. The estimated quantities of credits generated from this program is provided in Table 6. The identity and status of negotiations with each city as well as completed MOUs are included in the confidential enclosure.

**TABLE 6**

**SUMMARY OF OFFSETS GENERATED BY STREET-CLEANING**

City	CO (lbs/day)	SO <sub>x</sub> (lbs/day)	ROG (lbs/day)	PM <sub>10</sub> (lbs/day)
Confidential				248
Confidential				209
Confidential				347
Confidential				130
Confidential				435
Confidential				305
Total Available				1674

To calculate the emission reductions from enhanced street cleaning, the current emissions from the roadways were estimated based on U.S. EPA methodology (AP-42, Volume I, Fifth Edition, Chapter 13.2.1). The general equation for estimating dust emissions from vehicle traffic on paved roads is as follows:

$$E = k (sL/2)^{0.65} (W/3)^{1.5}$$

Where:

- E = particulate emission factor (EF) (pounds per vehicle miles traveled, lb/VMT);
- k = base emission factor for particle size range and units of interest (lb/VMT);
- sL = road surface silt loading (grams per square meter, g/m<sup>2</sup>); and
- W = average weight (in tons) of the vehicles traveling the road.

The multiplier k is provided in AP-42 for the various fractions of PM. In anticipation of ARB’s position on this issue, the calculations have used a k-value for PM<sub>2.5</sub> of 0.0066 lb/VMT (see confidential information for more details). The average vehicle weight was taken as 2.7 tons from the California Air Resources Board Area Source Manual, Section 7.9 (July 1997) for the average in Los Angeles County.

Silt loading on the roadway is a key variable that is dependent on the roadway characteristics (i.e., location and traffic levels). To obtain project-specific data, sampling was performed on selected streets in one city to develop a matrix of silt loadings for the various road types. Silt sampling and analyses were performed following the methods of AP-42 Appendix C.1 and C.2, respectively. Table 7 estimates silt loading on the local roadways.

**TABLE 7**  
**SILT LOADING ON LOCAL ROADWAYS**

Confidential Sampling – Measured Values			Similar Street	
Street Name	Traffic Count <sup>a</sup> (vehicles/day)	Silt Content, sL (g/m <sup>2</sup> )	Traffic Count (V/D) <sup>b</sup>	Silt Content, sL (g/m <sup>2</sup> ) <sup>c</sup>
Confidential	20,500	0.24	40,000	0.24
Confidential	17,500	0.09	35,000	0.09
Confidential	25,500	0.11	25,000	0.11
Confidential	9,500	0.21	20,000	0.17
Confidential	10,000	0.17	20,000	0.17
Confidential	10,000	0.16	10,000	0.12
Confidential	11,000	0.12	10,000	0.12
Confidential	29,000	0.68 <sup>d</sup>	--	--
Confidential	10,500	0.41 <sup>d</sup>	--	--
Confidential	60,000	0.30 <sup>d</sup>	--	--
Confidential	26,000	0.36	-- <sup>e</sup>	--

<sup>a</sup> From 1998 traffic study performed for confidential city.

<sup>b</sup> Traffic count assuming two-way street.

<sup>c</sup> In cases where two streets have similar traffic counts, the most conservative silt content was used..

<sup>d</sup> Numbers high due to construction on these streets. Silt numbers not used in the calculations.

<sup>e</sup> Not used for similar streets due to its location next to the beach (i.e., silt number considered high).

**5) SUMMARY**

Table 8 summarizes and totals the offsets with interpollutant transfers as discussed in the previous sections and with developed ERCs as discussed in the confidential enclosure:

**TABLE 8  
SUMMARY OF TOTAL OFFSETS REQUIRED AND AVAILABLE**

<b>Source</b>	<b>NOx (lbs/day)</b>	<b>CO (lbs/day)</b>	<b>SOx (lbs/day)</b>	<b>ROG (lbs/day)</b>	<b>PM<sub>10</sub> (lbs/day)</b>
Offsets Required		823	94	304	813
<u>Offsets Available:</u>					
Purchased ERCs			245	441	6
Interpollutant Transfers	(227)		(175)	(539)	469.5
Enhanced Street-Cleaning					1674
ERCs under Development or Negotiation	227	44	13	297	716
Shutdown of Units 1 and 2		1600	11	105	145
Total Offsets Available		1644	269	843	3010.5
Offset Balance		(809)	0	0	2197.5

The excess PM10 ERCs reflect the situation wherein all interpollutant trades are completed as requested and all ERCs under negotiation or development reach fruition. Obviously, the final amount of excess ERCs will be different. It is clear, however, that ESP II has demonstrated the ability to offset projected emissions.