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January 30, 2013

Mr. Thomas Howard
Executive Director
State Water Resources Board
Division of Water Quality, 15th Floor
1001 I Street
Sacramento, CA 95814

Dear Mr. Howard,

RE: ONCE-THROUGH COOLING POLICY IMPLEMENTATION PLAN UPDATE FOR EL SEGUNDO GENERATING STATION; Letter dated December 11, 2012

El Segundo Power, LLC (ESP), owner of the El Segundo Generating Station (ESGS), submits its response to the State Water Resources Control Board's (State Water Board) December 11, 2012 letter in which the State Water Board requested an update to ESP's Implementation Plan to meet the Statewide Water Quality Control Board Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy). ESGS is located at 301 Vista Del Mar Boulevard in El Segundo, CA and consists of 2 steam boiler units (Units 3 and 4) with a combined capacity of approximately 670 megawatts (MW). Units 1 and 2 with a combined capacity of 350 MW were retired and subsequently demolished in 2010.

The State Water Board's OTC Policy was adopted on May 4, 2010 and became effective on October 1, 2010. On November 30, 2010, the State Water Board sent a letter pursuant to Water Code Section 13383 directing ESP to submit an Implementation Plan (IP) addressing a list of specified information requirements. ESP submitted its IP on March 30, 2011. In the IP, ESP outlined the retirement of Units 1-3 and the demolition of Units 1 and 2 to enable the construction and operation of the El Segundo Energy Center (ESEC). ESEC is licensed by the California Energy Commission (CEC) (Docket 00-AFC-14C) and has a Permit to Construct/Temporary Permit to Operate from South Coast Air Quality Management District (SCAQMD; Facility ID 115663).

Construction of the new ESEC units (Units 5, 6, 7, and 8) began in 2011; when completed, ESEC will consist of two combined cycle trains with each containing a gas turbine generator (GTG), a heat recovery steam generator (HRSG), one steam turbine generator (STG) and air cooled heat exchangers for cycle heat rejection. The air cooled design will enable closed-loop circulation of cooling water which eliminates the need for once-through cooling (OTC). In addition, the construction of ESEC on the footprint of the retired and since demolished Units 1 and 2 facilitated the elimination of 208 million gallons per day (MGD) of OTC flow for Units 1 and 2, several years before the December 31, 2015 OTC compliance deadline.

Cooling water for ESP Units 3 and 4 currently flows through a single intake structure and out a common discharge conduit at a permitted rate of up to 399 MGD. OTC Policy § 2.C.(1) required that "No later than October 1, 2011, the owner or operator of an existing power plant with an offshore intake shall install large organism exclusion devices having a distance between exclusion bars of no greater than nine inches, or install other exclusion devices, deemed equivalent by the State Water Board." ESP acquired the necessary permits from the Army Corps of Engineers, California Coastal Commission, and the Regional Water Quality Control Board to complete this compliance obligation in 2011 for the offshore intake velocity cap. In addition, although not required by the OTC Policy, ESP obtained the necessary permits to install new, large organism exclusion device grates with minimum nine-inch spacing between bars on the offshore discharge structure. ESP recognized the safety and value provided by the nine-inch spaced exclusion bars to large marine life.

In a letter dated December 11, 2012, the State Water Board requested responses to six questions relating to the objectives and schedule for ESP to meet the OTC Policy for ESP Units 3 and 4. The questions are restated or paraphrased below, with responses following:

1. An updated compliance track schedule for Unit 3 and its replacement units 5, 6, 7, and 8
2. Provide the anticipated capacity of unit 4 repowering and any updated information on the Unit 4 repowering timeline. Specify the technology that is expected for cooling the repowered facility and indicate the volume of ocean water usage, if any.
3. Provide the status of any necessary permitting activities or electrical interconnection studies and/or agreements with the local utility of the California Independent System Operator (CAISO) to repower or retrofit your generating facilities.

4. An extension is asked for Unit 4 compliance with Track 1. Further information must be submitted to the State Water Board staff that supports reasoning for such a proposal. In addition, an update on the progress made to date toward the IP must be submitted.

5. Submit the studies and assessments done by the Santa Monica Bay Restoration Commission that ESGS has provided funding towards as a means of meeting interim impingement and entrainment impact mitigation requirement.

6. Information on the effectiveness of implementing water intake flow reductions, a comparison on present and historical water intake flow, and the MW production, as these data correspond to the requirements of OTC Policy Section 2(C)(2).

1. Unit 3 Schedule

The new ESEC units are approximately 90% complete with first fire on both combined cycle trains (Units 5 and 6 and Units 7 and 8) scheduled for April 2013. ESP will retire Unit 3 90 days after the first fire of both ESEC units in accordance with SCAQMD Permit to Construct issued on July 13, 2010; Unit 3 retirement is anticipated to occur by June 30, 2013. The retirement of Unit 3 will complete the Track 1 compliance requirement approximately 30 months prior to its OTC compliance deadline, thereby eliminating ~200 MGD of cooling water intake associated with Unit 3. The new ESEC units have a Commercial Online Date (COD) of August 1, 2013.

2. Unit 4 Redevelopment

ESP is currently evaluating a combination of air-cooled combined cycle and advanced peaking turbines to replace the MW that will be retired though the retirement of Units 3 and 4, which will achieve Track 1 compliance for those units. The replacement of Units 3 and 4 path would eliminate an additional ~200 MGD of OTC flow at the ESGS site. ESP intends to submit applications to the CEC and the SCAQMD during the first or second quarter of 2013 for the replacement of Units 3 and 4, with an anticipated COD in 2018-2019 for up to 435 MW of combined cycle and advanced peaking generation. This proposed schedule could be adjusted based upon coordination with CAISO, California Public Utilities Commission (CPUC), and the load serving entity with whom a Power Purchase Agreement (PPA) would be sought. The replacement of Units 3 and 4 with the proposed 435 MW is predicated upon receiving the necessary permits, a PPA, and lender financing.

The development of the ESEC required that Units 1, 2, and 3 be retired to provide the required emission offsets for the operation of the ESEC units. EPS have met the emissions offsets for the ESEC Units 5-8 through the

SCAQMD Rule 1304(a)(2). Rule 1304 allows for the emissions offset exemption to fully offset the project SOx, VOC, and PM10 emissions with the replacement of electric utility steam boiler(s) with combined cycle gas turbine(s), intercooled, chemically-recuperated gas turbines, or other advanced gas turbine(s). The new equipment must have a maximum electrical power rating (in megawatts) that does not allow basinwide electricity generating capacity on a per-utility basis to increase. The previous MW footprint of the ESGS was 1020 MW (Unit 1 = 175 MW, Unit 2 = 175 MW, Unit 3 = 335 MW, and Unit 4 = 335 MW). The ESEC units will generate 573 MW gross, which requires that the MW associated with Units 1, 2, and 3 be retired to comply with the megawatt-for-megawatt exemption in Rule 1304. The retirement of Units 1-3 for emissions offsets under Rule 1304 will result in a remainder of 112 MW from Unit 3 that can be credited towards the Units 3 and 4 replacement project that ESP will commence air permitting in the first quarter of 2013. These remaining 112 MW from Unit 3 when combined with the 335 MW associated with Unit 4 result in the potential megawatt-for-megawatt replacement value of up to 447 MWs at the ESP site.

3. Unit 4 Extension

ESP requested in the IP an extension to the OTC compliance deadline for Unit 4 from December 31, 2015 to December 31, 2017. The request for a 2-year extension was to maintain Unit 4's 335 MW available to the grid as needed, thereby balancing the early retirement/reduction of Unit 3's 335 MW ~2.5 years ahead of the compliance date. The additional 2 years of availability of Unit 4 was intended to continue to support LA Basin Local Capacity Region (LCR), and more specifically, the West LA and El Nido subareas, as CAISO and CPUC continue the evaluation of near and long term reliability in these load pockets as new OTC replacement generation comes on line or continues in development. When we requested the Unit 4 extension, the availability of Unit 4 beyond the current compliance date was predicated on the contractual status of Unit 4, the economics of extending the life of Unit 4 and further meeting CA OTC Policy requirements, and repowering opportunities to replace Unit 3 and 4.

ESP now intends to accelerate the replacement of Units 3 and 4, which would entail shutting Unit 4 down by its current December 31, 2015 compliance date, demolishing Units 3 and 4, and constructing replacement generation with a COD as soon as 2018 or 2019. The imminent shutdown of Unit 3 and the intended shutdown of Unit 4 will eliminate the remaining 399 MGD of cooling water intake at this site. If the CAISO determines that continued operation of Unit 4 beyond December 31, 2015 is necessary to maintain electric reliability, and if the Units 3 and 4 replacement project construction schedule allows the Unit 4 shutdown and demolition to occur

beyond that date, then ESP may resubmit its request for an extension of the December 31, 2015 compliance deadline.

4. Large Generator Interconnection Agreement

A Large Generator Interconnection Agreement (LGIA) exists between El Segundo Energy Center LLC, the Southern California Edison Company, and the CAISO. The LGIA provides the platform from which electrical interconnection needs and issues at ESGS are to be addressed and managed. The replacement of Units 3 and 4 – El Segundo Energy Center phase 2 repowering, is currently in Cluster 4; the associated deposits through the LGIA have been filed.

5. Santa Monica Bay Restoration Commission Projects

As discussed in the IP, ESP provided $1,000,000.00 to the Santa Monica Bay Restoration Commission (SMBRC) to support several projects within the Santa Monica Bay watershed. These funds were used to finance projects that furthered the goals of the Santa Monica Bay Restoration Plan, which is SMBRC's guidance document for improving water quality and habitat in the Santa Monica Bay watershed. ESP is currently coordinating with the SMBRC to acquire these studies. SMBRC has indicated that they will provide the supporting documentation within a few weeks. As a result, ESP requests an extension for submittal of these studies and assessments until March 1, 2013.

The projects which were funded are as follows.

- Economic Valuation study - This study looked at the economic benefits of non-consumptive uses in the region (swimming, surfing, kayaking, etc.) that are conducted in a healthy bay region.
- Rocky Reef Assessment - This study is assisting with data to help inform the Marine Life Protected Area (MLPA) process.
- County-wide Funding Feasibility Study - This study examined the issues and parameters facing a potential county-wide funding source for water quality projects. The funding source, for example, could come from parcel assessments or other funding mechanisms.
- Support for SMBRC Marine Technical Advisory Committee - Provides funding to support SMBRC's role in the MLPA process
- Bight '08 Rocky Reef Survey - Collaboration of multiple entities (public sector, private sector, education) which performed the Southern California Coastal Watershed Research Project's (SCCWRP) Southern California Bight survey to ensure that concerned areas in Santa Monica Bay be surveyed intensively as a separate strata to allow meaningful comparison of the Bay with the rest of the Southern California Bight.

- Dolphin Study - This study includes an evaluation of the types of dolphins in the bay, including sampling their skin for contaminants, etc.

6. Water Intake Flow Reductions

ESP does not run cooling water pumps without a specific electrical generation or critical system requirement. This position is consistent with the objectives of OTC Policy § 2.C.(2), which requires an existing power plant unit that is subject to the OTC Policy to cease intake flows when not engaging in power-generating activities, or critical system maintenance, unless a reduced minimum flow is necessary for operations, and is consistent with ESP's objective of reducing the large auxiliary electricity demand for the pump motors and associated costs.

ESP water intake requirements are directly related to the dispatch of either or both Units 3 and 4 through CAISO and/or the load serving entity dispatch instructions. The annual average flow for ESP is between 100 and 200 MGD with peaks of 399 MGD in the winter and summer months. While there was a consistent average from 2006 to 2011, the average flow increased in 2012. The flow has also increased since the SONGS outage in January 2012. ESP cooling water flow rate does not vary linearly with MW generation. For example, two cooling water pumps per unit are running whether ESP is producing 20 MWs or 335 MWs on a particular unit, corresponding to minimum and maximum load. Depending on the dispatch instructions, the respective units are expected to ramp up or down from minimum load to maximum load. The intake cooling water system as currently configured must continue at its respective flow rates per unit when the units are operating, in particular as the cooling system responds to changing levels of generation (i.e., "ramping"). As a result, comparing OTC flow rates to levels of generation does not yield a pattern to assess the reduction of OTC flow corresponding to a reduction of MW's produced over time. In addition, OTC circulating pumps are periodically operated for plant critical system maintenance needs when electrical generation is not occurring.

I anticipate the above information has addressed the State Water Board's questions regarding ESP's Implementation Plan. If you have any questions or comments, please do not hesitate to me at george.piantka@nrgenergy.com or (760) 710-2156.

Sincerely,

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As agent for El Segundo Power, LLC

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