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January 4, 2017

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

**Re: Once Through Cooling Policy Implementation Plan Update for Encina Power Station, NPDES CA0001350, Order R9-2006-0043; Letter dated November 7, 2016**

Dear Mr. Howard,

Cabrillo Power I LLC (Cabrillo), owner of the Encina Power Station (EPS) and wholly owned subsidiary of NRG Energy, Inc. (NRG), submits its response to the State Water Resources Control Board's (SWRCB) November 7, 2016 letter in which the SWRCB requested the most current information for EPS pursuant to the Use of Coastal and Estuarine Water for Power Plant Cooling (OTC Policy) and California Water Code §13383. Cabrillo respectfully responds to the questions and requests for information posed by the SWRCB in the November 7, 2016 letter.

- 1. Assuming the Court of Appeals denies the petitions, what is the expected time to on-line status of Carlsbad?*

On November 30, 2016, the California Court of Appeal upheld the CPUC's decision approving the Carlsbad Energy Center Project's (CECP) power purchase tolling agreement (PPTA) with SDG&E. While additional appeals are possible, we are optimistic that even in the face of such additional appeals, CECP will be on-line in the fourth quarter of 2018.

- 2. If Carlsbad is delayed, are the existing Encina units able to continue operating if the State Water Board were to extend the OTC Policy compliance date? Please explain.*

EPS is currently available if, at the request of the California Independent System Operator (CAISO), the SWRCB were to extend the OTC Policy compliance date. If EPS were to operate in 2018, compensation in the form of an appropriate contract would have to be addressed. Among other things, such compensation would have to cover recurring, or standard, operations and maintenance (O&M) expenses as well as non-recurring O&M expenses in 2018, including, but not limited to, maintenance dredging of Agua Hedionda Lagoon, which supplies once-through cooling water for Encina's steam boiler units.

- 3. Does Encina Unit 1 need to be shut down while Carlsbad is constructed? If so, please explain why and at what point in the construction schedule of Carlsbad would this shut down have to occur?*

NRG notified the CPUC and CAISO on October 3, 2016 that it intends to shut down and permanently retire Unit 1 as early as January 1, 2017. The current projected retirement date for Unit 1 is end of

February 2017. In any event, Unit 1 will need to be permanently disconnected from the San Diego Gas & Electric (SDG&E) switchyard bay earlier than the other EPS units to allow for construction of CECF interconnection facilities.

4. *In the event of an OTC Policy compliance date extension, are there electrical configurations, permit constraints, or any other reasons that would make some units preferred for extension over others?*

As mentioned in the previous response, Unit 1 will have operational constraints to allow for construction of CECF interconnection facilities after February 2017.

EPS currently operates under an administratively continued NPDES permit (No. CA0001350, Order R9-2006-0043). On March 9, 2016, the San Diego Regional Water Quality Control Board (SDRWQCB) issued draft NPDES Order R9-2016-0002 and the associated *Tentative* Time Schedule Order No. R9-2016-0007, which requires Cabrillo Power I LLC to comply with specified requirements in Order Number R9-2016-002. Cabrillo does not anticipate changes to the draft NPDES permit that would introduce permit conditions that would impact the availability of or preference for either unit.

5. *Assuming one or more Encina unit's OTC Policy compliance dates were deferred by the State Water Board due to a delay in the approval/start of construction of Carlsbad, what is the timeline and expected issues for each of the following options to provide the financial means for Encina to operate?*
  - a. *SDG&E and NRG to enter into a PPA and then have this PPA approved by the CPUC.*

It is difficult to predict a timeline for approval of a contract between SDG&E and Cabrillo. Per CPUC rules, any such contract would require CPUC approval via a Tier 3 advice letter. Tier 3 advice letters typically take months to resolve. For example, the Tier 3 advice letter for the EPS capacity contract covering 2017 was filed on June 9, 2016 and was approved by the CPUC on October 27, 2016.
  - b. *NRG to obtain a Reliability Must Run contract from the California Independent Systems Operator.*

We do not have sufficient information to respond to this question. The CAISO is in the best position to address this question
6. *Given the operating history of each Encina unit, which units are considered most reliable and least costly to maintain at the current reliability level?*

While all of EPS' units are maintained to the same standard and are of similar reliability, Units 4 and 5 are the more cost effective units to maintain and operate, followed by either Units 2 or 3. As noted above, Unit 1 is anticipated to retire ahead of the other units.

7. *What are the water pumping configurations of each unit, and does water intake most closely correspond to capacity online or to energy output? Are there other operational considerations affecting water pumping patterns that would differentiate one unit from the other? Please explain.*

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NPDES Permit CA0001350, Order R9-2006-0043 Fact Sheet provides the best description of the water usage of EPS. Each EPS unit has two (2) single-speed cooling water pumps. Water intake does not closely correlate either to capacity on-line or to energy output, but is influenced by both. Units 1-5 require two-pump operations to make full load. Units 4 and 5 can operate on one or two pumps depending on the load; however, we typically run two pumps in order to respond to CAISO's grid operation whereby load can be moved from minimum load to top load and back while the units are on-line. Operation of two pumps also ensures that Encina meets its wastewater temperature limits, in particular during changing load conditions. Intake pumps typically continue to operate up to 24 hours after the respective unit has shutdown to support equipment cool-down.

*8. Is there any other information that the State Water Board should be made aware?*

Cabrillo believes that there is some confusion regarding which party would seek a compliance date change/extension to the OTC Policy. The SWRCB November 7, 2016 letter states in paragraph 3:

Please note that a compliance date extension request requires an amendment to the OTC Policy. If and when circumstances that require an extension occur, NRG must submit a formal request for State Water Board consideration of an amendment to the compliance date set forth in the OTC Policy, along with supporting documentation. Please allow adequate time for the State Water Board to consider and process a request. The State Water Board requires a minimum of one year to process an OTC Policy compliance date deferral request.

Cabrillo is not in the position to make determinations about the need for ongoing operation of EPS units to ensure reliability. The members of SACCWIS are in the best position to make that determination and to request an extension to the OTC compliance deadline. As previously reported to SACCWIS, Cabrillo is currently planning to retire EPS in compliance with the OTC policy. Cabrillo will not seek an extension of the OTC deadline applicable to EPS to operate beyond 2017.

I anticipate the above information has addressed the SWRCB's questions regarding EPS and CECF. If you have any questions, comments, or concerns, please do not hesitate to contact me at [george.piantka@nrg.com](mailto:george.piantka@nrg.com) or (760) 710-2156.

Sincerely,  
Cabrillo Power I LLC



George L. Piantka, PE  
Sr. Director, Regulatory Environmental Services  
NRG Energy, West Region

cc: Jerry Carter, Cabrillo Power I LLC  
Eric Leuze, NRG  
Tim Sisk, NRG