

June 26, 2017

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814**RE: Cogentrix Comments on Draft Staff Report for Encina Power Station OTC
Compliance Extension**

Dear Water Board Members:

Cogentrix Energy Power Management LLC (Cogentrix) is pleased to submit comments on the Draft Staff Report for Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling for Encina Power Station (Encina) located in Carlsbad, California.

Cogentrix appreciates that the reliability of the State's power grid is paramount and thus does not oppose a Once-through Cooling (OTC) extension for part of Encina. Nonetheless, we also recognize that in ensuring reliability, the State Water Resources Control Board (Water Board) must also not ignore its mission to lower the use of coastal and estuarine waters for power plant cooling. Cogentrix proposes that an objective of the Water Board should be to mitigate potential water usage in 2018 as a condition of this extension which would align with the spirit and intent of the regulations, the protection of oceans and sea life.

Cogentrix has been an active participant in this process, providing both oral and written comments to the State Advisory Committee for Cooling Water Intake Structures (SACCWIS) at its February 23, 2017 meeting, and to the Water Board at its March 21, 2017 meeting. Cogentrix has previously raised two concerns to the Water Board. The first concern was that the SACCWIS extension request was supported by stale data from the California Independent System Operator (CAISO). Fortunately in a May 17, 2017 submission to the Water Board, the CAISO appropriately replaced the interim 2018 Encina Reliability Study with the most current Final 2018 Local Capacity Technical Analysis Report and Study Results (Final CAISO Study) as the supporting analysis for the extension.

The second concern was that an extension of Encina would result in the procurement of more capacity than was necessary for reliability at the expense of other non-OTC generation in the San Diego Area.

Cogentrix recommended that to the extent the Final CAISO Study identifies a reliability need for Encina, any extension of Encina should be limited to the fewest amount of units needed for reliability, and take into account the availability in 2018 of all non-OTC generation in the San Diego area. Cogentrix's recommendation to limit the amount of Encina capacity to support reliability in 2018 is consistent with the position the CAISO advanced in its May 17 letter to Thomas Howard, Executive Director:

Further, the ISO wishes to draw your attention to the specific findings that require additional clarification. As noted on pages 69-74 the ISO's studies have identified the continued need for local capacity in the San Diego/Imperial Valley area. *Taking all other resources in the local capacity areas into account*, this results in a need for approximately 100 MW from the Encina plant, which supports the need for the extension of the OTC compliance date to the end of 2018.¹

Based on the concerns raised and the progress thus far in this process, Cogentrix submits the following comments on the May 22nd, 2017, Draft Staff Report and proposes changes specifically regarding Section 9.

First, in describing the four SACCWIS Options, Cogentrix notes that SACCWIS Option 3² emphasizes the lack of time available for new construction. Option 3 thus errs by ignoring the option of contracting with existing, available capacity alternatives such as uncontracted fast start, fast ramping peaking plants. These existing facilities require no "construction lead time," but rather are immediately available to provide reliability within the San Diego basin without use of ocean and estuarial water for cooling.

Second, Cogentrix recommends an Alternative be added to the Section 9 subsection titled, "Alternatives and Discussion for the State Water Board." It currently posits two alternatives as 1) No Action; and 2) Adopt the Amendment as described (OTC compliance date change until 12/31/18).

¹ CAISO Letter to Thomas Howard, Executive Director RE: 2018 Local Capacity Technical Analysis, May 17, 2017 (emphasis added).

² Section 9, WATER BOARD Draft Staff Report for Encina Power Plant OTC Extension, May 22, 2017, at 9.

Cogentrix proposes an “Alternative 3” which recognizes and addresses the current inability of Encina to limit ocean flows when operating below full capacity. In Appendix A to these comments, Cogentrix provides Encina Capacity Factor versus Actual Ocean Flows Data. Appendix A compares the ocean water usage from a year with Encina low capacity factor to a year with Encina high capacity factor and demonstrates that the amount of water usage is near the same level in each of the years. Cogentrix accordingly proposes that a variable speed pump would be effective in restricting cooling water usage during periods in which only one or two of the Encina units are required for reliability.

Cogentrix recommends that this “Alternative 3” be inserted as follows:

Alternative 3: Adopt the Amendment as described with the following additional mitigation measures:

- 1. All other non-OTC generation in the San Diego sub-area shall be utilized (contracted to be available) which provides assurance that the reliability need for Encina is reduced to the extent possible.*
- 2. Prior to January 1, 2018, Encina shall install a variable speed pump on the water intake system to reduce water flow for power plant cooling to only the amount needed for the number of units dispatched.*

Cogentrix appreciates the Water Board’s consideration of these comments and respectfully urges the Water Board to consider, adopt and approve Alternative 3. Cogentrix believes that adoption of Alternative 3 would ensure grid reliability and also be consistent with and best advance the mission and goals of the OTC regulations.

Sincerely,

Davis Wright Tremaine LLP



Steven F. Greenwald

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cc: State Water Resources Control Board Members
Chair, Felicia Marcus
Vice Chair, Steven Moore
Member, Tam M. Doduc
Member, Dorene D'Adamo
Member, E. Joaquin Esquivel
Mr. Phil Crader, Assistant Deputy Director, Division of Water Quality
Ms. Mariela Paz Carpio-Obeso, Ocean Standards Unit Chief, Division of Water Quality



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California Energy Commission – Tracking Progress

Recent Power Production Patterns of OTC Facilities

It is commonly understood that the OTC plants have, over decades, changed power production patterns from base load units to load-following or peaking units, but the reality is more nuanced. **Tables 1 and 2** provide annual capacity factors for the natural gas-fired OTC plants still in service in the California ISO and LADWP balancing authority areas, respectively, for 2013, 2014, 2015, and through September 2016. Unit specific and cumulative (total amount for all units added together) capacity and capacity factors are provided.

Table 1: Annual Capacity Factors for Natural Gas OTC Units in the California ISO Balancing Authority Area, 2013 to 2016

Units	SWRCB Compliance Date	Unit Capacity	ANNUAL CAPACITY FACTORS			
			2013	2014	2015	2016 <Oct.
Alamitos Unit 1	12/31/2020	175	0.9%	1.4%	3.0%	2.7%
Alamitos Unit 2	12/31/2020	175	1.6%	5.4%	6.1%	3.6%
Alamitos Unit 3	12/31/2020	326	12.6%	16.6%	10.8%	8.8%
Alamitos Unit 4	12/31/2020	324	11.9%	18.7%	7.0%	10.5%
Alamitos Unit 5	12/31/2020	485	11.4%	1.7%	3.4%	2.6%
Alamitos Unit 6	12/31/2020	485	6.0%	4.5%	6.2%	3.7%
Alamitos Units 1-6	12/31/2020	1,970	8.5%	7.9%	6.1%	5.3%
Encina Unit 1	12/31/2017	107	4.0%	2.0%	4.0%	1.5%
Encina Unit 2	12/31/2017	104	2.9%	2.6%	5.1%	1.4%
Encina Unit 3	12/31/2017	110	5.3%	4.7%	5.3%	1.6%
Encina Unit 4	12/31/2017	300	5.1%	6.3%	8.2%	3.3%
Encina Unit 5	12/31/2017	330	7.7%	9.9%	10.4%	5.3%
Encina Units 1-5	12/31/2017	951	5.8%	6.5%	7.8%	3.4%
Huntington Beach Unit 1	12/31/2020	215	17.7%	22.3%	19.0%	14.6%
Huntington Beach Unit 2	12/31/2020	215	27.5%	26.2%	19.4%	14.9%
Huntington Beach Units 1-2	12/31/2020	430	22.6%	24.2%	19.2%	14.7%
Mandalay Unit 1	12/31/2020	218	4.5%	3.6%	5.9%	4.0%
Mandalay Unit 2	12/31/2020	218	6.2%	4.0%	7.1%	3.6%
Mandalay Units 1-2	12/31/2020	436	5.7%	3.8%	6.5%	3.8%
Moss Landing Unit 1	12/31/2020	540	48.4%	39.2%	35.5%	25.4%
Moss Landing Unit 2	12/31/2020	540	49.9%	47.0%	37.0%	26.0%
Moss Landing Unit 6	12/31/2020	702	4.3%	0.9%	5.3%	1.6%
Moss Landing Unit 7	12/31/2020	702	1.8%	0.4%	3.5%	2.4%
Moss Landing Units 1, 2, 6, 7	12/31/2020	2,484	23.2%	19.1%	18.2%	12.3%

Last updated 3/8/2017

Once-Through Cooling 3

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**APPENDIX A
ACTUAL WATER FLOW DATA FOR ONCE-THROUGH COOLING FACILITIES**

Power Plant Name	Average Annual Inflow (MGD)						
	2010	2011	2012	2013	2014	2015	2016
Humboldt Bay Power Plant Units 1&2	0	0	0	0	0	0	0
Potrero Power Plant	152	0	0	0	0	0	0
Contra Costa Generating Station	15.4	33	53	17	0	0	0
Pittsburg Power Plant	18.8	16.9	79	48.8	26	67	32
Moss Landing Power Plant	289.9	212.3	396.4	353.6	244.9	312.5	231
Diablo Canyon Nuclear Power Plant	2347	2368	2277	2311	2242	2360	2372
Morro Bay Power Plant	21.5	41.7	50.2	22.7	0.2	0.0	0
El Segundo Generating Station	112.9	97	197	217	107	135	7
Haynes Generating Station Units 1&2	720	812	886	725	471	506	448
Scattergood Generating Station	276.4	299	296.8	272	244	311	151
Harbor Generating Station	45.5	44.0	47.3	46.8	49.6	49.1	47
Alamitos Generating Station	2.9	106	375	496	332	324	317
Redondo Beach Generating Station	59	180	178	95	107	142	95
Mandalay Generating Station	39.7	56	77	109	63	78	56
Ormond Beach Generating Station	12	18	71	133	68	98	60
Huntington Beach Generating Station	202.9	242.6	238.5	178	169	159.6	134
South Bay Power Plant	34.5	0	0	0	0	0	0
Encina Power Plant	211.9	314.5	531.1	264.0	338.6	410.2	325
San Onofre Nuclear Generating Station	2030	2256	1677	1003	42	42	37

Source: EPA Flow Data, (Intergraded Compliance Information System (ICIS) Database) Renan Jauregui, Updated on Feb 3, 2017