

## DOCKETED

<b>Docket Number:</b>	09-AFC-02C
<b>Project Title:</b>	TID ALMOND 2 COMPLIANCE
<b>TN #:</b>	201918
<b>Document Title:</b>	Commission Order
<b>Description:</b>	Order approving a Petition to Amend Air Quality Conditions of Certification
<b>Filer:</b>	Bruce Boyer
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	3/25/2014 1:40:35 PM
<b>Docketed Date:</b>	3/25/2014

**CALIFORNIA ENERGY COMMISSION**

1516 NINTH STREET  
 SACRAMENTO, CA 95814-5512  
 www.energy.ca.gov



**STATE OF CALIFORNIA  
 ENERGY RESOURCES CONSERVATION  
 AND DEVELOPMENT COMMISSION**

<b>In the Matter of:</b>	)	
<b>Almond 2 Power Plant</b>	)	<b>Docket No. 09-AFC-2C</b>
	)	<b>Order No. 14-0312-4</b>
<b>Turlock Irrigation District</b>	)	<b>ORDER APPROVING a Petition to Amend Air Quality Conditions of Certification</b>
	)	
	)	

---

On February 22, 2013, Turlock Irrigation District (TID) filed a petition with the California Energy Commission (Energy Commission) to amend the December 15, 2010 Energy Commission Final Decision for the Almond 2 Power Plant (A2PP). On June 17, 2013, TID requested that additional modifications be added to the February 22, 2013 petition.

The proposed modifications to Air Quality Conditions of Certification would allow A2PP: (1) to delete the requirement that the fuel flow meter be non-resettable and totalizing; (2) to allow the testing of compliance with startup and shutdown emission limits to a single representative turbine, and (3) to modify or delete conditions that regulate certain activities with reference to construction and commissioning periods.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and found that it complied with the requirements of title 20, section 1769(a) of the California Code of Regulations and recommended approval of TID's petition to modify the A2PP Project and amend the Conditions of Certification.

**ENERGY COMMISSION FINDINGS**

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant adverse impacts to the environment or to public health and safety. The Energy Commission finds that:

- The petition meets all the filing criteria of title 20, section 1769(a) of the California Code of Regulations concerning post-certification project modifications;

- The modifications will not change the findings in the Energy Commission's Final Decision;
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525, and;
- The proposed modifications to the Air Quality Conditions of Certification will result in a beneficial change by providing updated air quality conditions for the A2PP project.

## CONCLUSION AND ORDER

The Energy Commission hereby adopts Staff's recommendation and approves the following changes to the Energy Commission Decision for the Almond 2 Power Plant project. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

## CONDITIONS OF CERTIFICATION

**AQ-1** ~~The permittee shall not begin actual on-site construction of the equipment authorized by this Authority to Construct until the lead agency satisfies the requirements of the California Environmental Quality Act (CEQA). [California Environmental Quality Act]~~ **The Authority to Construct N-3299-4-0 (or N-3299-5-0, N-3299-6-0) shall be converted into Permit to Operate prior to or concurrently with the implementation of this permit. [District Rule 2201]**

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.

**AQ-11** ~~Commissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the construction contractor to ensure safe and reliable steady state operation of the gas turbine and associated electrical delivery systems. [District Rule 2201]~~ **Deleted.**

**Verification:** ~~No verification necessary.~~

**AQ-12** ~~Commissioning period shall commence when all mechanical, electrical, and control systems are installed and individual system startup has been completed, or when a gas turbine is first fired, whichever occurs first. The commissioning period shall terminate when the plant has completed initial source testing, completed final plant tuning, and is available for commercial operation. [District Rule 2201]~~ **Deleted.**

**Verification:** ~~The project owner shall submit a commissioning plan to the CPM and APCO for approval at least 30 days prior to first firing of the gas turbine describing the~~

~~procedures to be followed during the commissioning period and the anticipated duration of each commissioning activity.~~

**AQ-13** ~~Emission rates from the gas turbine system during the commissioning period shall not exceed any of the following limits: NO<sub>x</sub> (as NO<sub>2</sub>)— 40.40 lb/hr and 969.6 lb/day; VOC (as CH<sub>4</sub>)— 8.41 lb/hr and 201.8 lb/day; CO— 40.00 lb/hr and 704.6 lb/day; PM<sub>10</sub>— 2.50 lb/hr and 60.0 lb/day; or SO<sub>x</sub> (as SO<sub>2</sub>)— 1.56 lb/hr and 37.4 lb/day. [District Rule 2201] **Deleted.**~~

**Verification:** ~~—A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).~~

**AQ-14** ~~During commissioning period, NO<sub>x</sub> and CO emission rate shall be monitored using installed and calibrated Continuous Emission Monitoring Systems (CEMS). [District Rule 2201] **Deleted.**~~

**Verification:** ~~—The project owner shall submit to the CPM and APCO for approval the commissioning plan as required in AQ-12.~~

**AQ-15** ~~The total mass emissions of NO<sub>x</sub>, VOC, CO, PM<sub>10</sub> and SO<sub>x</sub> that are emitted during the commissioning period shall accrue towards the quarterly emission limits. [District Rule 2201] **Deleted.**~~

**Verification:** ~~—A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).~~

**AQ-16** ~~During commissioning period, the owner or operator shall keep records of the natural gas fuel combusted in the gas turbine system on an hourly and daily basis. [District Rule 2201] **Deleted.**~~

**Verification:** ~~—A summary of significant operation and maintenance events and monitoring records required shall be included in the quarterly operation report (AQ-SC8).~~

**AQ-19** ~~During all types of operation (with an exception of ammonia injection tuning prior to the initial source test during the commissioning period), including startup and shutdown periods, ammonia injection into the SCR system shall occur once the minimum temperature of **540°F** at the catalyst face has been reached to ensure NO<sub>x</sub> emission reductions can occur with a reasonable level of ammonia slip. The minimum catalyst face temperature shall be determined during the final design phase of this project and shall be submitted to the District at least 30 days prior to commencement of construction. [District Rule 2201]~~

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.

**AQ-20** ~~The District shall administratively add the minimum temperature limitation established pursuant to the above Condition in the final Permit to Operate.~~ The District may administratively modify the temperature as necessary following any replacement of the SCR catalyst material. [District Rule 2201]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.

**AQ-41** Source testing to measure startup and shutdown NO<sub>x</sub>, CO, and VOC mass emission rates shall be conducted ~~before the end of the commissioning period and~~ at least once every seven years thereafter **on one of the three gas turbines (N-3299-4, '-5 or '-6)**. CEMS relative accuracy for NO<sub>x</sub> and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEMS data is not certifiable to determine compliance with NO<sub>x</sub> and CO startup emission limits, then startup and shutdown NO<sub>x</sub> and CO testing **on one of the three gas turbines** shall be conducted every 12 months. If an annual startup and shutdown NO<sub>x</sub> and CO relative accuracy audit demonstrates that the CEMS data is certifiable, the startup and shutdown NO<sub>x</sub> and CO testing frequency shall return to the ~~once-every-seven-years~~ schedule. [District Rule 1081]

**Verification:** **The project owner shall rotate the turbine tested for startup and shutdown operations until all of the units have been tested during startup and shutdown operations. If, however, the testing indicates the CEMS data is not certifiable, then the same turbine will be tested until the CEMS data is certifiable during startup and shutdown operations.** The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a preapproved protocol (**AQ-39**).

**AQ-42** Source testing to determine compliance with the NO<sub>x</sub>, CO, VOC<sub>2</sub> and NH<sub>3</sub> emission rates (lb/hr and ppmvd @ 15% O<sub>2</sub>) and PM<sub>10</sub> emission rate (lb/hr) shall be conducted ~~before the end of commissioning period and~~ at least once every 12 months thereafter. [District Rules 2201 and 4703, 40 CFR 60.4400(a)]

**Verification:** The results and field data collected during source tests shall be submitted to the District and CPM within 60 days of testing and according to a preapproved protocol (**AQ-39**). Testing for steady-state emissions shall be conducted upon initial operation and at least once every 12 months.

**AQ-47** ~~A non-resettable, totalizing~~ mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 4703]

**Verification:** The project owner shall make the site available for inspection by representatives of the District, ARB, and the Commission upon request.

**AQ-65** ~~Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of NO<sub>x</sub>: 1st quarter: 34,905 lb, 2nd quarter: 35,292 lb, 3rd quarter: 35,682 lb, and 4<sup>th</sup> quarter: 35,682 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201] Deleted.~~

**Verification:** ~~The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

**AQ-66** ~~NO<sub>x</sub>-ERC S-3113-2 (or a certificate split from this certificate) shall be used to supply the required NO<sub>x</sub> offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Deleted.~~

**Verification:** ~~The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

**AQ-67** ~~Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of VOC: 1st quarter: 6,113 lb, 2nd quarter: 6,113 lb, 3rd quarter: 6,114 lb, and 4th quarter: 6,114 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201] Deleted.~~

**Verification:** ~~The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

**AQ-68** ~~VOC-ERC C-1008-1 (or a certificate split from this certificate) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Deleted.~~

**Verification:** ~~The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

~~**AQ-69** Prior to operating under ATCs N-3299-4-0, N-3299-5-0 and N-3299-6-0, the permittee shall mitigate the following quantities of PM10: 1<sup>st</sup> quarter: 13,506 lb, 2nd quarter: 13,507 lb, 3rd quarter: 13,507 lb, and 4th quarter: 13,507 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201] **Deleted.**~~

~~**Verification:**—The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

~~**AQ-70** SOx-ERC S-3129-5 (or a certificate split from this certificate) shall be used to supply the required PM10 offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] **Deleted.**~~

~~**Verification:**—The project owner shall submit to both the District and CPM records showing that the project's offset requirements have been met prior to initiating operation.~~

~~**AQ-71** The District has authorized to use SOx reductions to offset emissions increase in PM10 at SOx/PM10 interpollutant offset ratio of 1.00. [District Rule 2201] **Deleted.**~~

~~**Verification:**—No verification necessary.~~

**IT IS SO ORDERED.**

CERTIFICATION

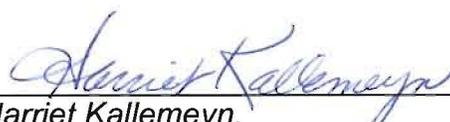
*The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the Energy Commission held on March 12, 2014.*

**AYE:** Weisenmiller, Douglas, McAllister, Hochschild, Scott

**NAY:** None

**ABSENT:** None

**ABSTAIN:** None

  
\_\_\_\_\_  
Harriet Kallemeyn,  
Secretariat