

**CALIFORNIA ENERGY COMMISSION**

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

<b>DOCKET</b>	
<b>82-AFC-2C</b>	
DATE	NOV 30 2011
RECD.	DEC 01 2011

**In the Matter of:** )  
 )  
**KERN RIVER COGENERATION** ) **Docket No. 82-AFC-2C**  
 )  
 ) **Order No. 11-1130-6**  
 )  
**KERN RIVER COGENERATION** ) **ORDER APPROVING a Petition to Modify**  
**COMPANY** ) **Air Quality Conditions of Certification to**  
 ) **Include 12-hour Start-up Time**  
 )

On July 14, 2011, Kern River Cogeneration Company, the owner/operator of the Kern River Cogeneration Project, submitted a petition requesting to modify the air quality conditions of certification to include a 12-hour startup period. The modifications will allow the Kern River Cogeneration Company to operate all four of the combustion gas turbines units in an extended start-up period for the purpose of tuning the units following removal and replacement of combustion hardware.

The modifications were approved by the San Joaquin Valley Air Pollution Control District and a revised Authority to Construct Permit was issued on September 20, 2011.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations and recommends approval of Kern River Cogeneration Company’s petition to modify the Kern River Cogeneration Project and amend related 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 impact to public health and safety, or the environment. 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 modification will not change the findings in the Energy Commission’s Final Decision pursuant to Title 20, section 1755;

- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525;

**CONCLUSION AND ORDER**

The California Energy Commission hereby adopts Staff's recommendations and approves the following changes to the Energy Commission Decision for the Kern River Cogeneration Project. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

**CONDITIONS OF CERTIFICATION**

- AQ-17** a. Start-up or ~~planned~~-shutdown of a CTG shall not exceed a time period of two (2) continuous hours, **except tuning startup periods defined here in.**
- b. For all CTGs the following emission limits shall apply during times of start-up, ~~or~~-shutdown, **or tuning startup** and shall be averaged over the time period specified below:
- NO2 140.0 lbm/hr **(2-hr average)** not to exceed ~~3360~~**552.8** lb/day
- CO **200 lbm/hr (1-hr average),** 140.0 lbm/hr **(2-hr average)** not to exceed ~~3360~~**1056** lb/day

**Dynamic performance testing and corresponding operating optimization set point adjustments of the combustion system of the CTG shall be defined as a tuning start-up used to tune the CTG combustion system to meet permitted emission limits. A tuning start-up period shall not exceed a time period of 12 consecutive hours per occurrence.**

**Verification:** Kern River Cogeneration Company shall maintain records necessary to submit quarterly reports to show start-up or planned shutdown days and daily emissions for those days. This information shall be included in the quarterly reports to be submitted to the CEC and SJVUAPCD.

- AQ-18** Pollutant emissions from each combustion turbine shall not exceed the following limits except during times of startup, ~~or~~-shutdown **or tuning startup periods** as defined in Condition AQ-17:

Gas Fired Case:

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Particulates	5.0 lbm/hr as PM10 <b><u>120.0 lbm/day PM10</u></b>
Sulfur Compounds	0.9 lbm/hr as SOx (as SO2) 21.6 lb/day as SOx (as SO2)
Hydrocarbons	12.0 lbm/hr (Non-methane) 288.0 lbm/day

Carbon Monoxide            1056 lbm/day  
                                     25 ppmv at 15% O<sub>2</sub>  
                                     44.0 lbm/hr 3-hour rolling average

~~After April 30, 2008, the emissions of oxides of nitrogen from each combustion turbine shall not exceed the following limits (these limits are to supersede the NO<sub>x</sub> emission limits shown above):~~

Oxides of Nitrogen        552.8 lbm/day and  
                                     12.4 lbm/hr as NO<sub>2</sub> and 3 ppmv at 15% O<sub>2</sub>  
                                     calculated on a 3 hour rolling average.

**Protocol:** For nitrogen dioxide, the Kern River Cogeneration Company (KRCC) shall identify the following for each day of operation, except during times of start up, ~~or~~ shutdown or tuning startup, as defined in Condition AQ-17:

- (1) the daily maximum hourly mass emission rate (lbs/hr),
- (2) the daily maximum rolling 3-hour average mass emission rate (lbs/hr) and
- (3) the total daily mass emissions (lbs/day).

For carbon monoxide, KRCC shall identify the total daily mass emissions (lbs/day) for each day of operation, except during times of start up, ~~or~~ shutdown or tuning startup, as defined in Condition AQ-17.

For particulate matter (PM<sub>10</sub>), sulfur compounds (SO<sub>2</sub> and SO<sub>4</sub>) and non-methane hydrocarbons, KRCC shall determine through the initial source test, the fuel-based emission factors (lbs/mmBtu) for each pollutant. Using these factors, KRCC shall determine the maximum allowable fuel input rate (mmBtu/hr) that would comply with the above stated emission limits (lbs/hr) (i.e., emission limit / emission factor = fuel input rate). KRCC shall then compare these fuel input rates (as determined above) with the actual daily maximum fuel input rate (mmBtu/hr) for each day of operation, except during times of start up, ~~or~~ shutdown or tuning startup, as defined in Condition AQ-17.

KRCC shall submit all excess emission reports and break down reports to demonstrate compliance with all concentration limits.

A transitional period is defined as a primary re-ignition period which must meet the following three conditions:

- shall not exceed one hour,
- NO<sub>x</sub> emissions shall not exceed 15 ppmvd @ 15% O<sub>2</sub> during that hour, and
- CO emissions shall not exceed 25 ppmvd @ 15% O<sub>2</sub>.

**Verification:** KRCC shall submit quarterly emission reports with all the information identified in the above protocol to the CEC compliance project manager.

**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 California Energy Commission held on November 30, 2011.*

**AYE:** Weisenmuller, Boyd, Douglas, Peterman

**NAY:** None

**ABSENT:** None

**ABSTAIN:** None

  
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Harriet Kallemeyn,  
Secretariat