# CALIFORNIA ENERGY COMMISSION

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



STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

AND DEVELOPMENT COMMISSION

In the Matter of:

GILROY COGENERATION
PROJECT

Docket No. 84-AFC-40

Order No. 13-0410-4

ORDER APPROVING a petition to install two new Selective Catalytic Reduction units on the project's two auxiliary boilers and proposed conditions of certification AQ-SC-1 thru AQ-SC-7 and modifications to condition 1.3.

On February 18, 2013, Calpine Gilroy Cogen, L.P., filed a revised petition with the California Energy Commission requesting to modify the Gilroy Cogeneration Project. The modification(s) proposed in the petition would install two new Selective Catalytic Reduction (SCR) units on the project's two auxiliary boilers. The addition of an SCR system on each boiler will allow the project to comply with recent changes to the Bay Area Air Quality Management District (BAAQMD) regulations for emissions of nitrogen oxides (NOx) for auxiliary boilers. The BAAQMD has determined that the project proposal would result in new permit to operate requirements from the district.

### 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 Calpine Gilroy Cogen, L.P. petition to modify the Gilroy Cogeneration Project and proposed conditions of certification AQ-SC-1 thru AQ-SC-7 and modifications to condition 1.3.

## **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;
- There will be no new or additional unmitigated, significant environmental impacts associated with the proposed changes;
- The facility will remain in compliance with all applicable Laws, Ordinances, Regulations and Standards;
- The modification(s) proposed in the petition will reduce NOx emissions from the project and allow the project to comply with recent changes to the BAAQMD regulations for emissions of nitrous oxides (NOx) for auxiliary boilers;
- There has been a substantial change in circumstances since the Energy Commission certification, thus justifying the changes.

### **CONCLUSION AND ORDER**

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

# **CONDITION OF CERTIFICATION**

AQ-SC1 Until each SCR is installed, tuned and becomes operational, but no later than 60 days after initial startup of each SCR unit, the owner/operator shall ensure that the nitrogen oxide (NOx) emissions from each auxiliary boiler (S-101, S-102) continue to meet 30 ppmvd at 3 percent oxygen averaged over any one-hour period, except during startup and shutdown periods. (Basis: Regulation 9-7-301.1)

Verification: The project owner/operator shall monitor compliance with the NOx emission limitation with the continuous in-stack emission monitors described in Condition 1.12.

AQ-SC2
Within 60 days of initial startup of each SCR unit, the owner/operator shall ensure that the nitrogen oxide (NOx) emissions from each auxiliary boiler (S-101, S-102) do not exceed 5 ppmvd at 3 percent oxygen averaged over any one-hour period, except during startup and shutdown periods. (Basis: Regulation 9-7-307.6)

<u>Verification: The project owner/operator shall monitor compliance with the NOx emission limitation with the continuous in-stack emission monitors described in Condition AQ-SC3.</u>

AQ-SC3 The owner/operator shall monitor NOx and CO from each boiler with a District approved CEM system (Basis: Regulation 1-521, 2-1-403).

<u>Verification: The project owner/operator shall submit to the BAAQMD a CEM plan</u> that complies with the BAAQMD Manual of Procedures, Volume V (Continuous Emissions Monitoring and Procedures) for approval prior to the installation of the CEM system. The plan will describe the monitoring equipment, monitoring locations, calibration techniques and schedules, reporting format and procedures and schedules. Prior to operation, the project owner/operator shall submit to the compliance project manager (CPM) evidence of BAAQMD approval of the CEM plan.

AQ-SC4
Within 60 days of initial startup of each SCR unit, the owner/operator shall ensure that the ammonia (NH3) emission concentration at each exhaust point of S-101 and S-102 does not exceed 10 ppmvd, on a dry basis, corrected to 3 percent oxygen as measured with a District approved method, except during startup and shutdown periods. (Basis: Regulation2, Rule 5).

<u>Verification: The project owner/operator shall monitor ammonia slip through the testing requirements of AQ-SC5.</u>

AQ-SC5
Within 90 days of initial startup of each SCR unit, the owner/operator shall have a District approved source test conducted for ammonia (NH3) at the exhaust point of S-101 and S-102 and on an annual basis thereafter. The owner/operator shall submit the results of the District approved source test to the District Source Test Section within 60 days of the source test date. (Basis: Regulation 2, Rule 5)

Verification: The project owner/operator shall submit a source test protocol to the BAAQMD and CPM at least 7 days prior to the source test. The owner/operator shall submit the results of the BAAQMD approved source test to the BAAQMD Source Test Section and CPM within 60 days of the source test date.

AQ-SC6 S-101 and S-102 shall not operate more than 15,800 hours combined on a 12-month rolling average basis. (Basis: Regulation 2, Rule 5, Regulation 2-1-403).

Verification: The project owner/operator shall maintain records of the operating hours of the boilers and issue quarterly reports to the BAAQMD and CPM detailing the annual combined operational hours on a 12 month rolling average basis.

AQ-SC7
The owner/operator of S-101 and S-102 shall maintain records of hours of operation on a 12-month rolling average basis, fuel usage, the duration of each startup and shutdown event including emissions of NOx and CO during each event, all CEM data, and source test records in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District representatives upon request. (Basis: Regulation 2-6-501, Regulation 9-7-307.6).

<u>Verification: The project owner/operator shall monitor S-101 and S-102 hours of operation on a 12 month rolling average basis, fuel usage, the duration of each</u>

startup and shutdown event including NOx and CO emissions during each event and issue quarterly reports to the BAAQMD and CPM. All source test data will be submitted to the BAAQMD and CPM within 60 days of the source test date. In lieu of submitting hourly CEM data to the CPM, the owner/operator shall submit a list in the quarterly report of any upset or breakdown condition.

1.3 An oxidizing catalyst (A-100) shall reduce CO emissions from the gas turbine (S-100) by at least 80% (by weight), averaged over any three-hour period. The catalyst shall operate during all periods of turbine operation except during start-up, which shall not exceed one-half hour for a warm start, or one hour for a cold start. Annual CO emissions shall not exceed 100 tons per year. The District's Source Test Division Section shall approve the location of sampling ports needed to test for compliance with this condition.

Verification: <u>The project owner/operator</u> GEC shall submit a copy of BAAQMD's annual test results for CO in the following quarterly air quality report required by condition no. 15 after receipt from BAAQMD. <u>The owner/operator</u> GEC shall submit in the annual compliance report data that demonstrates compliance with the 100 tons/year <u>CO</u> limitation <u>in any consecutive twelve months for the auxiliary boilers and turbine combined stated above</u>.

## 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 a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on April 10, 2013.

AYE: Douglas, McAllister, Hochschild, Scott

NAY: None

ABSENT: Weisenmiller

ABSTAIN: None

Harriet Kallemeyn,

Secretariat