

**BEFORE THE HEARING BOARD  
OF THE  
NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT**

**In the matter of the Petition for  
Regular Variance  
by PG&E Company for HBGS**                   **) No. 2020-01  
) CONFIRMATION OF FINDINGS  
) AND ORDER  
) FOR REGULAR VARIANCE**

On February 3, 2020, pursuant to Health and Safety Code (HSC) § 42352 and District Regulation VI, Rule 606 of the North Coast Unified Air Quality Management District, a duly noticed petition for a regular variance submitted pursuant to HSC § 40826 by Pacific Gas and Electric Company ("PG&E") (hereinafter referred to as "Petitioner"), came on for hearing by the North Coast Unified Air Quality Management District Hearing Board. The hearing was conducted by Board members Charles Rocklein (Chair of the Hearing Board), Sarah Samples, John Corbett, Ken Mierzwa and Dr. Denver Nelson.

Petitioner was represented by Charles Holm, PG&E Humboldt Bay Generating System (HBGS) Plant Manager, and Ryan Messinger, HBGS Environmental Compliance Manager. The District was represented by Brian Wilson, Air Pollution Control Officer (APCO); Jason L. Davis, Deputy APCO and Permitting & Planning Division Manager; Al Steer, Compliance and Enforcement Division Manager; and Nancy Diamond, District General Counsel.

Representatives of the Petitioner, the District, and members of the public were sworn and gave extensive public testimony concerning the requested variance. The District, and Petitioner were given the right of cross-examination and the public was given the opportunity to direct questions to both the Petitioner and the District.

The following documents and other evidentiary material were marked for identification and received into evidence.

- Exhibit 1: Petitioner's Diagram of a generic power generation process, emissions control, and emissions monitoring;
- Exhibit 2: District summary table titled "2019 HGBS Emissions Testing Results Summary (Loads below 50%), In-Stack Continuous Emissions Monitor System (CEMS) Data (Dec 15-22, 2019)";
- Exhibit 3: Notice of Public Hearing to be held on February 3, 2020;
- Exhibit 4: Letter from Petitioner to APCO dated December 10, 2019;
- Exhibit 5: Petitioner's Application for Hearing for a Regular Variance under HSC §42350(a);
- Exhibit 6: Petitioner's Public Safety Power Shutoff (PSPS) Emissions Study, dated December 5, 2019, prepared for PG&E by TRC Environmental Corporation, ("TRC Source Test Plan");
- Exhibit 7: Petitioner's Letter to the APCO dated January 29, 2020;
- Exhibit 8: District Staff Report for Regular Variance Hearing on February 3, 2020; and
- Exhibit 9: Title V Federal Operating Permit and District Permit to Operate No: NCU 059-

12 for the PG&E HBGS ("Operating Permit").

Neither party offered an exhibit that was not received into evidence. After receiving evidence and testimony, findings and decision were made as follows:

### **FINDINGS**

Based on the evidence and testimony, the following findings are made pursuant to HSC § 42352 and District Regulation VI, Rule 606 – Decisions:

1. Petitioner owns and operates the Humboldt Bay Generating System (HBGS), located at 1000 King Salmon Avenue, Eureka, California, under the terms and conditions of the Title V Federal Operating Permit and District Permit to Operate No. NCU 059-12 ("Operating Permit").
2. Petitioner submitted an application for interim variance pursuant to HSC § 42351 and District Regulation VI, Rule 603, to conduct emissions testing while operating three of ten Wartsila Dual Fuel reciprocating engines located at the HBGS at loads lower than 50%, the minimum load level allowed by the HBGS Operating Permit.
3. The Operating Permit requires operation of all ten engines at loads of 50% or more and contains emission limitation conditions based on this operational load. This condition was created at the time the permit was first issued based on the manufacturer's guarantee because deployment of this type of engine technology was new and no emissions profile for operations at lower loads was available or guaranteed by the manufacturer.
4. Petitioner's request to operate and test the HBGS at loads lower than 50% is part of its investigation into whether it can operate the HBGS in an island mode or as a black start unit to serve local power need during the Public Safety Power Shutdown (PSPS) events.
5. Concurrent with its submittal of the application for interim variance, Petitioner submitted an application for a regular variance pursuant to HSC § 42352 and District Regulation VI, Rule 606.
6. The interim variance was heard and granted on December 14, 2019, and was to expire the sooner of February 4, 2019, or the date on which the Hearing Board conducted a hearing on the regular variance application of Petitioner.
7. Petitioner performed short term emission testing as allowed under the terms of the initial variance from December 15-17, 2019 while operating under 50% load in accordance with the TRC Source Test Plan.
8. On January 29, 2020, the District received a request to amend the Petitioner's application for regular variance to be granted relief until June 30, 2020, and to include two operational testing studies of Ammonia Injection Load Point Determination Tests, and Island Operational Testing.



9. Operation of the HBGS to serve local area power need during PSPS events serves the public health and safety by reducing private, retail, commercial, and governmental reliance on individual back-up generators, most of which are not controlled or monitored for air emissions.
10. Proposed additional testing in island mode conditions will allow PG&E to operate HBGS in potential situations that isolates it from sections of the grid.
11. Proposed additional testing during the term of the variance will cause insignificant air quality impacts.
12. Petitioner shall accept certain conditions to the issuance of a variance designed to maintain the lowest possible impact on air quality emissions.
13. The required findings identified under HSC § 42352 and District Regulation VI, Rule 606 have been satisfied, based on the proposed findings in the District staff report, summarized as follows:
  - a. *That the petitioner is, or will be, in violation of a provision of the HSC or of any rule, regulation, or order of the District, including but not limited to, any permit condition.* Testing of the HBGS at loads less than 50% would violate Operating Permit Condition #111.
  - b. *That due to conditions beyond the reasonable control of the petitioner, requiring compliance would result in either a) an arbitrary or unreasonable taking of property, or b) the practical closing and elimination of a lawful business.* Petitioner's initial testing indicates that it may be able to operate the HBGS in island mode during local power outages caused by PSPS and other out-of-area events, rather than remaining out of operation in shut down mode. An application to modify the Operating Permit to be able to operate during local power outages caused by PSPS and other out-of-area events requires additional information about the emissions profile, additional data analyses, and modeling that can only be obtained through further operation in low load modes.
  - c. *That such closing or taking would be without a corresponding benefit in reducing air contaminants.* Discharges from the HBGS regulated through an Operating Permit are preferable to the unregulated emissions from hundreds or thousands of gas or diesel back-up generators operated throughout the region during PSPS and other electric power shutdown events.
  - d. *That the applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.* Curtailing operations of the HBGS would not allow Petitioner to operate at the low load levels necessary to confirm readiness to operate in island mode or as a black start unit to serve local area load.
  - e. *During the period the variance is in effect, that the applicant will rescue excess emissions to the maximum extent feasible.* As part of this Order, Petitioner is required to i) continue adhere to all conditions in the Operating Permit, including ; the use of all Air Pollution Control systems (SCR, CO catalyst, etc.) all monitoring equipment and requirements (CEMS, etc.).

- f. *During the period the variance is in effect, that the applicant will monitor or otherwise quantify emissions levels from eth source, if requested to do so by the District, and report these emissions levels to the District pursuant to a schedule established by the District. As part of this Order, Petitioner will be required to quantify and report all monitoring data obtained during testing, in addition to regular monitoring reporting.*

### **ORDER**

Based upon the above findings, Petitioner is granted a regular variance from the following conditions of the Operating Permit:

- Condition #91- gas mode, ppm, lbs/hr, and lbs/mmbtu
- Condition #92 -gas mode, daily emissions limits
- Condition #94 - diesel mode ppm, lbs/hr and lbs/mmbtu
- Condition #95 - DPM emissions limits, hourly and daily only
- Condition #96 - S-1 through S-10 daily emission limits in diesel mode
- Condition #111 - S-1 through S-10 load less than 50%
- Condition #115 - catalyst temperature requirements
- Condition #116- CO reductions of greater than or equal to 70%

The period of this variance shall be governed by HSC § 42358(a), and shall expire no later than June 30, 2020. During the period of this variance, unless otherwise stated, Petitioner shall:

1. Be granted relief from the permit conditions and limitations of the Operating Permit as listed and proposed above during the periods of time of emission source and operational testing at load levels less than the 50%, so as to determine low load emissions profile and how the engines will perform at lower loads in order in order to confirm the HBGS's readiness to operate in an island mode or as a black start unit to serve area load.
2. Be granted relief from the permit conditions and limitations of the Operating Permit during the periods as proposed in the petition until June 30, 2020.
3. Conduct the operational testing of Ammonia Injection Load Point Determination Tests by tuning the ammonia (NH<sub>3</sub>) injection control system at low loads (below 50%) by adding five (5) additional load points for all engines. The total of engine specific testing shall not exceed 132 hours, per the following assumptions and allowances:
  - Proposal is for 2 test runs per engine, per each fuel type; a standard test is about 3 hours.
  - There will be about 6 hours of testing per each fuel type (i.e. 12 hours).
  - There will be about 12 hours of testing per engine (i.e. 120 hours).
  - Allowance for a 10% contingency (for 132 hours of total testing time allowed).
4. Conduct the island operational testing to determine the ability of the plant and engines to achieve real world island operation similar to PSPS conditions involving up to ten (10) engines.



5. Continue to adhere to all conditions in the Operating Permit, and specifically continue to use all Air Pollution Control (APC) systems (SCR and CO catalyzt, etc.) to the maximum extent possible during all low load tests and operation.
6. Continue to adhere to all regulatory monitoring requirements in the Operating Permit, specifically used of Continuous Emissions Monitoring (CEMS) during all low load tests and operation.
7. Within thirty (30) days of issuance of these Orders, submit the final source results of the emission testing authorized and conducted in December 2019 per the TRC Source Test Plan.
8. Within thirty (30) days after the date of expiration of the variance, HBGS to prepare and submit a report of the emissions discharged that occurred as a result of relief obtained pursuant to the interim and regular variance in accordance with District Rule 404(c) - Excess Emission Fee Schedule once the final results of the proposed testing are obtained. Payment of fees shall be made according to District Rule 404(c).


**SO ORDERED**, on Motion made by Board member Corbett and seconded by Board member Nelson, effective February 3, 2020 and expiring June 30, 2020.

Ayes: Board members Rocklein, Samples, Corbett, Mierzwa and Nelson  
 Nays: None.

By:   
 Charles Rocklein, Chairperson of the Hearing Board

Date: 2/28/20


ATTEST:

By:   
 Heather Bitner, Clerk of the Hearing Board

Date: 2/28/20

*Approved as to form:*

PG&E

By:   
 Charles Holm, HBGS Plant Manager

Date: 2/26/20

North Coast Unified Air Quality Management District

By:   
 Brian Wilson, Air Pollution Control Officer

Date: 2/26/2020

