DAVID Y. IGE
GOVERNOR OF HAWAII

ELIZABETH A. CHAR, M.D.
DIRECTOR OF HEALTH

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
(7019 2280 0000 3440 6033)

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:
20-440E CAB
File No. 0214-10

October 22, 2020

Mr. Jeffrey Walsh
General Manager
Kalaeloa Partners, L.P.
91-111 Kalaeloa Boulevard
Kapolei, Hawaii 96707

Dear Mr. Walsh:

SUBJECT: Amendment of Covered Source Permit (CSP) No. 0214-01-C
Application for Significant Modification No. 0214-10
Kalaeloa Partners, L.P.
223.5 MW Kalaeloa Cogeneration Plant
Located At: 91-111 Kalaeloa Boulevard, Kapolei, Oahu
Date of Expiration: May 15, 2013 **(Expiration Date to be Revised Upon Permit Renewal)**

In accordance with Hawaii Administrative Rules (HAR), Chapter 11-60.1, and pursuant to your application for a significant permit modification dated February 22, 2018, the updated greenhouse gas (GHG) emission reduction plan on October 2018, and the additional information on January 23, 2020, February 14, 2020, April 2, 2020, May 22, 2020, and June 9, 2020 from Hawaiian Electric Company, Inc. submitted on behalf of the partnership for cap adjustments, the Department of Health, Clean Air Branch (herein after referred to as Department), hereby amends CSP No. 0214-01-C issued to Kalaeloa Partners, L.P. (KPLP) for Kalaeloa Cogeneration Plant (KCP) on May 16, 2008, and amended on July 24, 2009.

In accordance with HAR, Chapter 11-60.1, Subchapter 11, the amendment incorporates provisions for partnering the KPLP, cogeneration plant with other affected plants to combine emissions for flexibility in achieving GHG reductions. The amendment includes GHG emission cap adjustments for 2019 and a total combined GHG emission cap for 2020 and beyond that is a sixteen (16) percent reduction from the combined partnership baseline GHG emissions level. The amendment also includes alternate operating scenarios in the event delays are encountered in restoring the Puna Geothermal Venture (PGV) facility on the island of Hawaii to the net generation that preceded its shutdown in 2018. Individual and total combined GHG emission caps established in each facility's GHG emission reduction plan are incorporated in the amendment with associated provisions pursuant to HAR §11-60.1-204(d)(6)(C). The partnering facilities included in this amendment are:

Independent Power Producers (IPPs)

- AES Hawaii, LLC (AES), CSP No. 0087-02-C
- Hamakua Energy, LLC (Hamakua Energy), CSP No. 0243-01-C
- Kalaeloa Partners, L.P. (KPLP), CSP No. 0214-01-C

Hawaiian Electric Companies

- Hawaiian Electric Company, Inc. (Hawaiian Electric), CSP No. 0548-01-C
- Hawaiian Electric Company, Inc. (Hawaiian Electric), CSP No. 0238-01-C
- Hawaiian Electric Company, Inc. (Hawaiian Electric), CSP No. 0239-01-C
- Hawaiian Electric Company, Inc. (Hawaiian Electric), CSP No. 0240-01-C
- Hawaii Electric Light Company, Inc. (Hawaii Electric Light), CSP No. 0007-01-C
- Hawaii Electric Light Company, Inc. (Hawaii Electric Light), CSP No. 0234-01-C
- Hawaii Electric Light Company, Inc. (Hawaii Electric Light), CSP No. 0235-01-C
- Maui Electric Company, Ltd. (Maui Electric), CSP No. 0031-04-C
- Maui Electric Company, Ltd. (Maui Electric), CSP No. 0067-01-C
- Maui Electric Company, Ltd. (Maui Electric), CSP No. 0232-01-C

The three (3) IPP permits and CSP No. 0548-01-C (Campbell Industrial Park (CIP) Generating Station) will specify individual and total combined GHG emission caps established for all of the partnering facilities. Any GHG emission cap revision, except for reasonably anticipated alternate operating scenarios due to the PGV facility shutdown, will require each of these facilities (AES, Hamakua Energy, KPLP, Hawaiian Electric CIP) to submit a significant permit modification.

The permits for the remaining partnering facilities operated by Hawaiian Electric, Hawaii Electric Light, and Maui Electric will not specify individual and total combined GHG emission caps, but will reference GHG emission caps included in CSP No. 0548-01-C. Designating CSP No. 0548-01-C as the main HECO permit will reduce the burden of modifying all Hawaiian Electric Companies' permits should an emission cap be revised. Only CSP No. 0548-01-C would require modification as the emission caps will not be incorporated separately into each facility's permit.

The permit amendment includes a revision to Attachment II: Special Condition No. C.1.c.iii for increasing the total combined specification used oil fired by the combustion turbines on a rolling twelve (12) month basis from 10,000 gallons to 20,000 gallons.

CSP No. 0214-01-C issued on May 16, 2008, and amended on July 24, 2009, is amended as follows:

1) Added Attachments and Forms:

   a) Attachment II - GHG: Special Conditions – GHG Reduction Requirements; and
   b) Monitoring Report Form: GHG Emissions.

2) Superseded Attachments and Forms:

   a) Attachment II: Special Conditions
   b) Attachment III: Annual Fee Requirements;
   c) Attachment IV: Annual Emissions Reporting Requirements; and
   d) Compliance Certification Form.

3) Superseded Condition:

a) Attachment I: Standard Condition No. 28:

28. Any document (including reports) required to be submitted by this permit shall be certified as being true, accurate, and complete by a responsible official in accordance with HAR, Sections 11-60.1-1 and 11-60.1-4, and shall be mailed to the following address:

State of Hawaii
Clean Air Branch
2827 Waimano Home Road, #130
Pearl City, HI 96782

Upon request and as required by this permit, all correspondence to the State of Hawaii Department of Health associated with this CSP shall have duplicate copies forwarded to:

Manager
Enforcement Division, Air Section
U.S. Environment Protection Agency, Region 9
75 Hawthorne Street, ENF-2-1
San Francisco, CA 94105

All other permit conditions of CSP No. 0214-01-C issued on May 16, 2008, and amended on July 24, 2009, shall not be affected and shall remain valid.

If there are any questions regarding these matters, please contact Mr. Dale Hamamoto of the Clean Air Branch at (808) 586-4200.

Sincerely,

MARIANNE ROSSIO, P.E., ACTING CHIEF
Environmental Management Division

DH:tkg

Enclosures

ATTACHMENT II: SPECIAL CONDITIONS
COVERED SOURCE PERMIT NO. 0214-01-C

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

In addition to the standard conditions of the CSP, the following special conditions shall apply to the permitted facility.

Section A. Equipment Description

1. This permit encompasses the following significant equipment and associated appurtenances:

Unit No. *(for purposes of this permit)*	Equipment Description
CT1	Combustion Turbine with evaporative cooling module, max production rated at 86 MW at 76 °F, manufactured by ABB, type GT 11N with GT 11NM upgrade, typical fuel LSFO, diesel during start-up and shutdown.
CT2	Combustion Turbine with evaporative cooling module, max production rated at 86 MW at 76 °F, manufactured by ABB, type GT 11N with GT 11NM upgrade, typical fuel LSFO, diesel during start-up and shutdown.
HRSG1	Heat Recovery Steam Generator (HRSG), manufactured by Deltak with a condensate preheater installed in the stack breach (duct) of HRSG1, uses exhaust heat from CT1.
HRSG2	Heat Recovery Steam Generator (HRSG), manufactured by Deltak with a condensate preheater installed in the stack breach (duct) of HRSG2, uses exhaust heat from CT2.
STG1	Steam Turbine Generator, 51.5 MW, manufactured by ABB, type KT, uses steam from heat recovery boilers HRSG1 and HRSG2.
C1	Cooling Tower, 4-cell, mechanical forced draft, maximum design cooling capacity 383 million BTU per hour. Maximum water flow per cell of 523,530 gallons per hour.

(Auth.: HAR §11-60.1-3)

2. An identification tag or name plate shall be displayed on the equipment listed in Section A.1 to show model no., serial no. and manufacturer. The identification tag or name plate shall be attached to the equipment in a conspicuous location.

(Auth.: HAR §11-60.1-5)

Section B. Applicable Federal Regulations

1. Combustion Turbines CT1 and CT2 are subject to the provisions of the following federal regulations:

   a. 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions; and
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart GG, Standards of Performance for Stationary Gas Turbines.

   (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161; 40 CFR 60.1, 60.330)[1]

2. The permittee shall comply with all applicable provisions of these standards, including all emission limits, notification, testing, monitoring, and reporting requirements.

   (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161)

Section C. Operational and Emission Limitations

1. Combustion Turbines, Unit Nos. CT1 and CT2

   a. "Start-up" and "Shut-down."

      i. "Start-up" is defined as and shall not exceed the two (2) hour period beginning with the initiation of fuel consumption by the combustor of the combustion turbine.
      ii. "Shut-down" is defined as and shall not exceed the one (1) hour period prior to the termination of fuel consumption by the combustion turbine.

   b. Air Pollution Control Equipment.

      KPLP shall continuously operate and maintain the following air pollution controls to meet the emission limits specified in Table 1 and Table 2 of Section C.1.e (Maximum Emission Limits) of this permit, except during start-up and shut-down.

      i. Combustor steam injection shall occur at a minimum steam-to-fuel mass ratio of 1.3 to 1.0 on each of the two (2) combustion turbines to control nitrogen oxide (NO_x) emissions. NO_x emissions from each exhaust stack shall not exceed 130 ppmv at fifteen (15) percent oxygen (O_2) (dry, three (3) hour rolling average) and 483 pounds per hour from each of the two (2) exhaust stacks as referenced in Tables 1 and 2 of Section C.1.d. Combustor steam injection shall be at the minimum steam-to-fuel ratio within two (2) hours of commencing "start-up" and shall continue until initiation of "shut-down" of each combustion turbine.

ii. The use of alternative control system(s) other than those specified above is contingent upon receiving the Department's written approval to use such a system(s) and shall not relieve the permittee from the responsibility to meet all emissions limitations contained within this CSP.

c. Fuel Use and Specification.

i. The two combustion turbines shall be fired using only No. 6 low sulfur fuel oil (LSFO), No. 2 (diesel) fuel or specification used oil with a maximum sulfur content not to exceed 0.5 percent by weight. The sulfur content of the fuel oil shall be measured in accordance with the most current American Society for Testing and Materials (ASTM) method. The fuel sulfur content shall be verified by either:

A) Sampling and analyzing each batch of fuel for its sulfur content; or
B) Obtaining a certificate of analysis on the sulfur content from the supplier for each batch of fuel oil received.

ii. The total annual fuel consumption of LSFO, Diesel and Specification Used Oil shall not exceed 2,541,600 barrels per year (106,747,200 gallons per year) as calculated on a rolling twelve (12) month basis.
iii. The total amount of specification used oil fired in the combustion turbines shall not exceed 20,000 gallons as calculated on a rolling twelve (12) month basis.
iv. The maximum fuel heat input for each combustion turbine shall not exceed 900 MMBTU/hr based on the fuel's lower heating value (LLHV). The fuel heating value shall be determined in accordance with the most current ASTM method.

d. Combustion of Specification Used Oil.

i. The permit conditions prescribed herein may be revised at any time by the Department to reflect federal or state promulgated rules on specification (spec) used oil.
ii. This permit shall not release the permittee from compliance with all applicable state and federal rules and regulations on the handling, transporting, storing and burning of specification used oil in the combustion turbines.
iii. The specification used oil shall consist only of used oil generated by KPLP. Specification used oil may be obtained from other sources, provided a written notification identifying the new source is submitted to the Department, and approved, prior to the acceptance of the spec used oil. An analysis must accompany the delivery of each batch of spec used oil.

iv. Samples of the used oil generated from within KPLP shall be analyzed for compliance with the limits in Attachment II, Special Condition No. C.1.d.vi prior to being burned. These samples shall be taken in such a manner that the composite sample is representative of all the used oil in that batch. Each composite sample shall be submitted in a timely manner to a qualified laboratory and analyses obtained for the constituents/properties which limits are given in Special Condition No. C.1.d.vi.

Additional used oil may be added to the batch provided that:

A) The used oil in the specification used oil tank is retested after the addition of untested used oil; or
B) The holding tanks or drums of untested used oil are tested prior to addition to the specification used oil tank, and the results are verified to meet the requirements of Attachment II, Special Condition No. C.1.d.vi.

v. In no case shall any used oil that has not been tested and verified (by laboratory analysis or as specified in Attachment II, Special Condition No. C.1.d.vi) to meet the specification used oil requirements of Attachment II, Special Condition No. C.1.d.vi be added to the blend tank and burned.

vi. The following constituents/properties of the specification used oil shall not exceed the specified limits listed below:

Constituent/Property	Allowable Limit
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogen	1,000 ppm maximum
Sulfur	0.5% maximum by weight
Flash Point	100°F minimum
Polychlorinated Biphenyls (PCB)	< 2 ppm

vii. Should the results of any used oil analyses deem the sample to be hazardous, the contaminated containers shall be identified and isolated from the non-contaminated containers and properly disposed. Fuel blending to meet the constituents/properties limits given in Attachment II, Special Condition No. C.1.d.vi is allowable only for used oil that were not deemed hazardous.

viii. If fuel blending is used, the permittee shall retest or perform calculations to verify that the blended fuel meets the specification used oil limits in Special Condition No. C.1.d.vi. Blended fuel oil meeting Special Condition No. C.1.d.vi is considered specification used oil and requires additional blending with fuel oil No. 2.

ix. This permit does not authorize the permittee to burn hazardous waste or off-specification used oil. The permittee shall not accept or burn used oil that has been declared or determined to be hazardous waste and shall not burn off-specification used oil.

e. Maximum Emission Limits.

i. Following start-up and prior to shut-down of each of the two (2) LSFO fired combustion turbines, the permittee shall not discharge or cause to be discharged into the atmosphere from each of the two (2) exhaust stacks sulfur dioxide (SO_2), nitrogen oxides (NO_X as NO_2), carbon monoxide (CO), volatile organic compounds (VOC), and particulate matter (PM) in excess of the following specified limits as a function of generator load:

Table 1: Emission Limits at Specified Generator Loads[1] (3-hour rolling average)

Compounds	≤ 60%	>60%-80%	> 80%
Sulfur Dioxide (ppmvd)	98	98	98
Nitrogen Oxides (ppmvd) as NO_2	130	130	130
Carbon Monoxide (ppmvd)	30	25	14
Volatile Organic Compounds (ppmvd) as C_3H_8	2	2	1
Particulate Matter (grains/dscf)	0.026	0.021	0.018

[1]Fifteen (15) Percent O_2, Standard Conditions (68 °F, 29.92 in. Hg)

Table 2: Emission Limits at Specified Generator Loads (3-hour rolling average)

Compounds	≤ 60%	>60%-80%	> 80%
Sulfur Dioxide (lb/hr)	488	488	488
Nitrogen Oxides (lb/hr) as NO_2	483	483	483
Carbon Monoxide (lb/hr)	40	35	30
Volatile Organic Compounds (lb/hr) as C_3H_8	3.6	3.6	3.6
Particulate Matter (lb/hr)	80	80	80

f. Visible Emissions (VE)

For any six (6) minute averaging period, the combustion turbine exhaust stacks shall not exhibit VE of twenty (20) percent opacity or greater, except as follows: during start-up, shutdown, or equipment breakdown, the combustion turbines may exhibit VE not greater than sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minute period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-32, §11-60.1-33, §11-60.1-90, §11-60.1-161)

Section D. Monitoring and Recordkeeping Requirements

All records, including support information, shall be true, accurate, maintained at the facility for at least five (5) years from the date of the monitoring samples, measurements, tests, reports, or application. Support information includes all calibration and maintenance records and copies of all reports required by the permit. These records shall be compiled in a permanent form suitable for inspection and made available to the Department or their representative upon request.

1. Combustion Turbine Generators, CT1 and CT2.

    a. The permittee shall operate and maintain a continuous monitoring system to monitor and record the ratio of steam-to-fuel being fired in each combustion turbine.
    b. The permittee shall operate and maintain a continuous monitoring system to monitor and record the total amount of fuel oil fired in each turbine. In addition, records on the sulfur content, density, and heating value shall be maintained for each batch of fuel oil fired in the two (2) combustion turbines. Copies of the analysis or other information used in the determination of the fuel oil sulfur content, density, and heating value shall also be included. The permittee shall also calculate and determine the SO_2 emissions from each of the two (2) exhaust stacks in ppmvd at fifteen (15) percent O_2 and pounds per hour on an hourly or more frequent basis.
    c. The permittee shall operate and maintain a continuous monitoring system to record the operating load for each of the two (2) combustion turbines.
    d. The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) to measure and record the NO_x, CO, and CO_2 or O_2 concentrations in the fuel gas. If a CEMS using CO_2 as a diluent is used, 40 CFR Part 60, Appendix A, Method 20 Equations 20-2 and 20-5 shall be used. The system shall meet EPA performance specifications (40 CFR Part 60.13 and 40 CFR Part 60, Appendix B and 40 CFR Part 60, Appendix F). The emission rates for NO_x and CO shall be recorded in ppmvd at fifteen (15) percent O_2 and pounds per hour.
    e. The permittee shall maintain a file of all measurements, performance testing requirements and test results, system performance evaluations, calibration checks, adjustments and maintenance as performed, and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection.

    (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, 40 CFR 60.13)

2. Specification Used Oil.

    a. The permittee shall maintain records of the following:

        i. The sampling date for every used oil analysis, amount of used oil the sample represents, date of analyses, and results of the analyses;
        ii. Date when the used oil is blended and the total amount blended; and

iii. The total amount of specification used oil combusted on a daily and monthly basis.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, 40 CFR 60.13)

3. Inspection, Maintenance, and Repair Log.

An inspection, maintenance, and repair log shall be maintained for the equipment listed in Attachment II, Special Condition A.1. of this permit. Replacement of parts and repairs to the facility equipment shall be documented.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

4. Visible Emissions (VE)

a. With the exception of the month where the annual VE performance test is conducted pursuant to Special Condition No. D.4.b, The permittee shall conduct **monthly** (*calendar month*) VE observations for each combustion turbine in accordance with Method 9 or by use of a Ringelmann Chart as provided. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements.*
b. The permittee shall conduct **annually** (*calendar year*) VE observations for each combustion turbine by a certified reader in accordance with Method 9. For each period, two (2) observations shall be taken at fifteen (15) second intervals for six (6) consecutive minutes for each equipment. Records shall be completed and maintained in accordance with the *Visible Emissions Form Requirements*.
c. Upon written request and justification by the permittee, the Department may waive the requirement for a specific annual VE test. The waiver request is to be submitted prior to the required test and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior tests indicating compliance by a wide margin, documentation of continuing compliance, and further that operations of the source have not changed since the previous source test.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-32, §11-60.1-90, §11-60.1-161)

5. All records required by this section shall include, if applicable:

a. Monitoring location, date and time of sampling or measurements;
b. Dates sampling analyses were performed;
c. Name and address of the company or entity that performed the analyses;
d. Analytical techniques or methods used;

e. Analysis of results; and
f. Operating conditions during the time of sampling or measurement.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

Section E. Notification and Reporting Requirements

1. The permittee shall submit a written report of all excess emissions to the Department for **every calendar quarter**. Excess emissions shall be defined as:

   "Any rolling three (3) hour period during which the average emissions, as measured by the continuous emissions monitoring system or determined through calculations based on the information obtained from the continuous monitoring systems, exceed the emission limits set forth in Table 1 and Table 2 of Section C.1.e.," and

   "Any one (1) clock-hour period following start-up and preceding shutdown during which the average steam-to-fuel ratio, as measured by the continuous monitoring system, falls below the ratio specified in Special Condition C.1.b.i."

   The report shall include the following:

   a. The magnitude of excess emissions determined in accordance with 40 CFR Part 60.13 (h), any conversion factors used, and the date and time of commencement and completion of each individual time period of excess emissions.
   b. Specific identification of each individual period of excess emissions that occurs during startups, shutdowns, and malfunctions of the combustion turbines. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted, shall also be reported.
   c. The date and time identifying each period during which the continuous emission monitoring system was inoperative except for zero and span checks. The nature of each system repair or adjustment shall be described.
   d. The report shall so state if no excess emissions have occurred. Also, the report shall so state if the continuous emission monitoring system operated properly during the period and was not subject to any repairs or adjustments except for zero and span checks.
   e. All reports shall be postmarked **by the 30th day** following the end of each calendar quarter. The enclosed form: *Excess Emissions and Monitoring System Performance Summary Report* shall be used in conjunction with the reporting of excess emissions.

f. Excess emissions indicated by the continuous monitoring systems except during the two (2) hour start up and one (1) hour shut down period shall be considered violations of the applicable emission limit for the purposes of this permit following the completion of the source performance test and CEMS certification.

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

2. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 16, 17, and 25, respectively:

   a. *Intent to shut down air pollution control equipment for necessary scheduled maintenance;*
   b. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and*
   c. *Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.*

   (Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. The permittee shall report **within five (5) working days** *any deviations from the permit requirements*, including those attributable to upset conditions, the probable cause of such deviations and any corrective actions or preventive measures taken. Corrective actions may include a requirement for additional stack testing, or more frequent monitoring, or the implementation of a corrective action plan.

   (Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

4. **At least thirty (30) days prior to** the following events, the permittee shall notify the Department in writing of:

   a. *Conducting a source performance test* as required by Attachment II, Section F, Testing Requirements.
   b. *Conducting a performance specification test on the CEMS.* The testing date shall be in accordance with the performance test date identified in 40 CFR Part 60, Section 60.13.

   (Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161)

5. Compliance Certification

   During the permit term, the permittee shall submit at least **annually** to the Department and U.S. EPA, Region 9, a Compliance Certification pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall include, at a minimum, the following information:

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The methods used for determining the compliance status of the source currently and over the reporting period;
e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification, including the requirements of Section 114 (a) (3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504 (b) of the Clean Air Act; and
f. Any additional information as required by the Department, including information to determine compliance.

The compliance certification shall be submitted within **ninety (90) days after** the end of each calendar year, and shall be signed and dated by an authorized representative. Upon the written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

6. Annual Emissions

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall report **annually** the total tons per year emitted of each regulated air pollutant, including any hazardous air pollutants. The reporting of annual emissions is due **within sixty (60) days following** *the end of each calendar year.* The enclosed Annual Emissions Report Form(s): *Fuel Consumption* shall be used in reporting.

Upon the written request of the permittee, the deadline for reporting of annual emissions may be extended, if the Department determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

7. The permittee shall submit **semi-annually** the following reports to the Department. The reports shall be submitted **within sixty (60) days after** *the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31),* and shall be signed and dated by an authorized representative.

a. The total fuel oil consumption on a monthly and 12-month rolling average basis. The enclosed Monitoring Report Form: *Fuel Consumption and Certification*, shall be used.
b. Any opacity exceedances as determined by the required VE monitoring. Each exceedance reported shall include the date, six (6) minute average opacity reading, possible reason for exceedance, duration of exceedance, and corrective actions taken. If there were no exceedances, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedances for that semi-annual period. The enclosed Monitoring Report Form: *Opacity Exceedances*, shall be used.
c. The used oil analysis which indicated exceedances of the limits specified in this permit. If there were no exceedances, the permittee shall submit in writing a statement indicating that there were no exceedances for that semi-annual period. The enclosed Monitoring Report Form: *Used Oil Consumption*, shall be used.
d. The total amount of specification used oil combusted in the combustion turbines on a monthly and rolling twelve (12) month basis. The enclosed Monitoring Report Form: *Used Oil Consumption*, shall be used.

(Auth.: HAR §11-60.1-3, §11-60.1-33, §11-60.1-90)

Section F. Testing Requirements

1. On an annual basis or at such times specified by the Department, the permittee shall conduct or cause to be conducted a source performance test on the combustion turbines CT1 and CT2 for SO_2, NO_x, CO, VOC, and PM. The performance tests shall be conducted at sixty (60) percent and eighty (80) percent of the maximum rated capacity, and the maximum operating (full load) capacity of each of the two combustion turbines being tested and at other operating capacities as may be specified by the Hawaii Department.

   The Department may waive a specific performance test upon written request of the permittee. Such a request would require justification on the basis that prior test(s) had shown compliance by a wide margin, operations of the source have not changed since the previous source test, and adequate means exist to show continuing compliance.

   (Auth.: HAR §11-60.1-3, §11-60.1-90)

2. Performance tests for the emissions of SO_2, NO_x, CO, VOC, and particulate matter shall be conducted and results reported in accordance with the test methods set forth in 40 CFR Part 60, Appendix A, and 40 CFR Part 60, Part 60.8. The following test methods or EPA-approved equivalent methods with consent from the Department of Health shall be used:

   a. Performance test for the emissions of SO_2 shall be conducted using EPA Methods 1-4 and 20.

b. Performance tests for the emissions of NO_x shall be conducted using EPA Methods 1-4 and 20.
c. Performance tests for the emissions of CO shall be conducted using EPA Methods 1-4 and 10.
d. Performance tests for the emissions of VOC shall be conducted using EPA Methods 1-4 and 25A.
e. Performance tests for the emissions of particulate matter shall be conducted using EPA Methods 1-5.

(Auth.: HAR §11-60.1-11, §11-60.1-90; 40 CFR 60.8)[1]

3. The performance test shall consist of three (3) separate runs using the applicable test method. For the purpose of determining compliance with an applicable regulation, the arithmetic mean of the results from the three (3) runs shall apply.

   (Auth.: HAR §11-60.1-11, §11-60.1-90; 40 CFR 60.8; SIP §11-60-15)[1,2]

4. The permittee, at its own expense, shall be responsible for installing and providing the necessary ports in stacks or ducts and such other safe and proper sampling and testing facilities, as may be necessary for the determination of the air pollutant emissions. The Department may monitor the tests.

   (Auth.: HAR §11-60.1-5, §11-60.1-11, §11-60.1-90,.SIP §11-60-15)[2]

5. **At least 30 days prior** *to performing a test*, the permittee shall submit a written performance test plan to the Department that describes the test duration, test locations, test methods, source operation, and other parameters that may affect test results. Such a plan shall conform to U.S. EPA guidelines including quality assurance procedures. A test plan or quality assurance plan that does not have the approval of the Department may be grounds to invalidate any test and require a retest.

   (Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-11, §11-60.1-90)

6. Any deviations from these conditions, test methods, or procedures may be cause for rejection of the test results unless such deviations are approved by the Department before the tests.

   (Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

7. **Within sixty (60) days after** *completion of the performance test*, the permittee shall submit to the Department and U.S. EPA, Region 9 the test report which shall include the operating conditions of the combustion turbines and associated equipment which are tested at the time of the test, the summarized test results, comparative results with the permit emission limits, and other pertinent field and laboratory data.

   (Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

Section G. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition 29.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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[1] The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

[2] The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.

ATTACHMENT II - GHG: SPECIAL CONDITIONS
GHG REDUCTION REQUIREMENTS
COVERED SOURCE PERMIT NO. 0214-01-C

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

In addition to the standard conditions of the CSP, the following state enforceable special conditions shall apply to the permitted facility.

Section A. Equipment Description

1. Attachment II - GHG of this permit encompasses the following equipment and associated appurtenances:

Unit No.	Equipment Description
CT1	Combustion Turbine with Evaporative Cooling Module, Maximum Production Rated at 900 MMBtu/hr, 86 Megawatts (MW) at 76 °F, Manufactured by ABB, Type GT11N with GT 11NM Upgrade, Typical Fuel LSFO, Diesel During Start-up and Shutdown.
CT2	Combustion Turbine with Evaporative Cooling Module, Maximum Production Rated at 900 MMBtu/hr, 86 MW at 76 °F, Manufactured by ABB, Type GT 11N with GT 11 NM Upgrade, Typical Fuel LSFO, Diesel During Start-up and Shutdown.

(Auth.: HAR §11-60.1-3)

2. The equipment is subject to GHG emission reduction requirements of HAR, Chapter 11-60.1, Subchapter 11, and associated permit conditions based on information from the GHG emission reduction plan and permit application for significant modification. The GHG emission reduction plan shall become a part of the CSP application process for renewals and any required modifications pursuant to HAR, Chapter 11-60.1, Subchapter 5. With each subsequent GHG emission reduction plan submittal, the permittee shall report:

   a. The GHG emission reduction status;
   b. Factors contributing to the emission changes;
   c. Any control measure updates; and
   d. Any new developments or changes that would affect the basis of the facility-wide GHG emissions cap.

   (Auth.: HAR §11-60.1-5, §11-60.1-204(g))

Section B. GHG Permit Conditions

1. Permit conditions specified in Attachment II – GHG, including provisions to limit maximum potential GHG emissions, are state-only enforceable requirements which are not federally enforceable under the federal Clean Air Act.

   (Auth.: HAR §11-60.1-3, §11-60.1-90, 11-60.1-161; 40 CFR §70.6)[1]

2. The permittee shall comply with all applicable provisions of these conditions, including all emission limits, notification, testing, monitoring, and reporting requirements. The major requirements of these provisions are detailed in the special conditions of this attachment.

   (Auth.: HAR §11-60.1-3, §11-60.1-90, 11-60.1-161)[1]

Section C. GHG Emission Limitations

1. GHG Emission Caps

   a. KCP shall not emit or cause to be emitted carbon dioxide equivalent (CO_2e) emissions in excess of the following individual caps, except as specified in Attachment II - GHG, Special Condition No. C.1.c.iv:

      i. For calendar year 2019, each partnering facility shall not exceed the following individual GHG emission caps:

Calendar Year 2019			
Generating Station	CSP Permit No.	CO_2e Emission Cap[a]	
		Metric Tons per Calendar Year	Short Tons per Calendar Year
AES Hawaii, LLC Cogeneration Plant	0087-02-C	1,534,598	1,691,605
Hamakua Energy, LLC Cogeneration Plant	0243-01-C	227,906	251,223
Kalaeloa Partners, L.P. Cogeneration Plant	0214-01-C	993,198	1,094,813
Hawaiian Electric Campbell Industrial Park Generating Station	0548-01-C	48,752	53,740
Hawaiian Electric Honolulu Generating Station	0238-01-C	0	0
Hawaiian Electric Kahe Generating Station	0240-01-C	1,935,707	2,133,752
Hawaiian Electric Waiau Generating Station	0239-01-C	733,265	808,286
Hawaii Electric Light Kanoelehua-Hill Generating Station	0234-01-C	171,991	189,588
Hawaii Electric Light Keahole Generating Station	0007-01-C	248,043	273,421
Hawaii Electric Light Puna Generating Station	0235-01-C	64,666	71,282
Maui Electric Kahului Generating Station	0232-01-C	140,281	154,633
Maui Electric Maalaea Generating Station	0067-01-C	417,182	459,864
Maui Electric Palaau Generating Station	0031-04-C	23,999	26,454

[a]Metric Tons = (0.90718474) x (Short Tons)

      ii. For calendar year 2020 and beyond, each partnering facility shall not exceed the following individual GHG emission caps, except as specified in Attachment II – GHG, Special Condition No. C.3:

Calendar Year 2020 and Beyond			
Generating Station	**CSP Permit No.**	**CO_2e Emission Cap[a]**	
		Metric Tons per Calendar Year	**Short Tons per Calendar Year**
AES Hawaii, LLC Cogeneration Plant	0087-02-C	1,281,442	1,412,548
Hamakua Energy, LLC Cogeneration Plant	0243-01-C	139,433	153,699
Kalaeloa Partners, L.P. Cogeneration Plant	0214-01-C	1,056,486	1,164,577
Hawaiian Electric Campbell Industrial Park Generating Station	0548-01-C	112,041	123,504
Hawaiian Electric Honolulu Generating Station	0238-01-C	0	0
Hawaiian Electric Kahe Generating Station	0240-01-C	1,998,996	2,203,516
Hawaiian Electric Waiau Generating Station	0239-01-C	796,554	878,050
Hawaii Electric Light Kanoelehua-Hill Generating Station	0234-01-C	156,449	172,456
Hawaii Electric Light Keahole Generating Station	0007-01-C	219,727	242,208
Hawaii Electric Light Puna Generating Station	0235-01-C	28,800	31,747
Maui Electric Kahului Generating Station	0232-01-C	140,281	154,633
Maui Electric Maalaea Generating Station	0067-01-C	417,182	459,864
Maui Electric Palaau Generating Station	0031-04-C	23,999	26,454

[a]Metric Tons = (0.90718474) x (Short Tons)

b. All partnering facilities shall not exceed the following combined emission caps:

   i. For 2019, total combined CO_2e emissions in excess of 7,208,661 short tons (6,539,587 metric tons) per calendar year.
   ii. For 2020 and beyond, CO_2e emissions in excess of 7,023,257 short tons (6,371,392 metric tons) per calendar year, except as specified in Attachment II – GHG, Special Condition No. C.3.

c. For purposes of the CO_2e emission limits in Attachment II - GHG, Special Condition Nos. C.1.a and C.1.b of this permit:

   i. The CO_2e emissions shall have the same meaning as that specified in HAR §11-60.1-1;
   ii. In accordance with HAR §11-60.1-204(d)(6)(B), biogenic carbon dioxide (CO_2) emissions shall not be included when determining compliance with the emission limits;
   iii. The permittee shall be in compliance with the emission limits by the end of 2019 and each calendar year thereafter;

iv. The permittee may exceed the applicable emissions cap specified in Attachment II - GHG, Special Condition No. C.1.a, if the GHG emissions limit specified in Attachment II - GHG, Special Condition No. C.1.b is met; and

v. At no time shall the permittee exceed Attachment II - GHG, Special Condition Nos. C.1.a and C.1.b simultaneously over a calendar year. For incidences when Attachment II - GHG, Special Condition Nos. C.1.a and C.1.b are exceeded simultaneously, emissions in excess of the total combined cap shall be allocated according to the following equation for compliance purposes:

$$X = XG \frac{(A - C)}{\sum_{A_i > C_i}(A_i - C_i)}$$

Where,

X = Adjusted portion in metric tons or short tons of GHG emissions that are in excess of total combined cap specified in Attachment II – GHG, Special Condition No. C.1.b. The equation applies to all affected facilities that do not meet the individual and total combined GHG emission caps specified in Attachment II – GHG, Special Condition Nos. C.1.a and C.1.b, respectively.

XG = Total combined actual GHG emissions from affected facilities minus total combined GHG emissions cap.

A = Actual GHG emissions from the affected facility.

C = GHG emissions cap for the affected facility.

$\sum_{Ai>ci}(Ai - Ci)$ = The sum of the difference between the actual emissions and cap emissions for all facilities that did not achieve the individual facility-wide GHG emissions cap.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, §11-60.1-204)

2. GHG Emission Cap Revisions

a. The facility-wide GHG emissions caps may be re-evaluated and revised by the Department in accordance with HAR §11-60.1-204(h).

b. Any revision to the facility-wide GHG emissions cap shall be considered a significant modification subject to the application and review requirements of HAR §11-60.1-104. For each GHG emission cap revision, the Department may impose additional emission limits or requirements, or limit the time-frame allowed for the revised GHG emissions cap.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-204)

3. Alternate Operating Scenarios

The alternate operating scenario for the PGV facility shutdown due to volcanic activity on the island of Hawaii in 2018, shall remain in effect until an additional net energy generation of 26,883 MWh per month from the PGV facility is reached in any month of the year. The following shall apply to the individual and total combined alternate operating scenario GHG emission cap adjustments starting January 1, 2020, and for any subsequent year until these alternate operating scenarios no longer apply:

a. Attachment II – GHG, Special Condition No. C.3 no longer applies when:

$$NG_{PGV\text{-}R} \geq NG_{PGV2017}$$

Where,

$NG_{PGV2017}$ =	26,883	Net generating capacity from the PGV facility in calendar year 2017 on an average monthly basis (MWh) preceding its shutdown.
$NG_{PGV\text{-}R}$ =		Net generation from the restored PGV facility (MWh per month).

b. The alternate scenario individual GHG emission cap adjustment for calendar year 2019 is 97,524 short tons for Hamakua Energy, 17,132 short tons for Kanoelehua-Hill Generating Station, 31,213 short tons for Keahole Generating Station, and 39,535 short tons for Puna Generating Station. Starting on January 1, 2020, and for any subsequent year, the alternate scenario GHG emissions individual cap adjustment for each of the foregoing island of Hawaii partnering facilities shall be calculated by adding one-twelfth (1/12) of the 2019 annual adjustment for each facility's individual GHG emissions cap specified in Attachment II – GHG, Special Condition No. C.1.a.ii per month for the facilities from January 1 of that year. Monthly adjustments to the individual GHG emission caps shall be determined as specified in Attachment II – GHG, Special Condition No. C.3.d until this alternate operating scenario no longer applies as specified in Attachment II – GHG, Special Condition No. C.3.a. A full one-twelfth (1/12) of the annual cap adjustment shall apply per month until the criteria in Attachment II – GHG, Special Condition No. C.3.a are met and not thereafter.

c. The PGV alternate scenario total combined cap adjustment for calendar year 2019 is 185,404 short tons. Starting on January 1, 2020, and for any subsequent year, the PGV alternate operating scenario total combined GHG emissions cap adjustment shall be calculated by adding one-twelfth (1/12) of the 2019 annual adjustment of 15,450 short tons to the total combined cap specified in Attachment II – GHG, Special Condition No. C.1.b.ii per month from January 1 of that year. Monthly adjustments to the total combined GHG emissions cap shall be determined as specified in Attachment II – GHG, Special Condition No. C.3.d until this alternate operating scenario no longer applies as specified in Attachment II – GHG, Special Condition No. C.3.a. A full one-twelfth (1/12) of the annual cap adjustment shall apply per month until the criteria in Attachment II – GHG, Special Condition No. C.3.a are met and not thereafter.

d. Monthly adjustments to the individual and total combined GHG emission caps shall be determined with the following equation:

$$AC = FAC/12$$

Where,

FAC = Full adjustment to CO_2e caps (short tons – refer to table below).
AC = Monthly adjustment to GHG emissions caps.

Generating Station	Full Adjustment to CO_2e Caps (Short Tons)	2020 CO_2e Cap (Short Tons)	FAC/12 (Short Tons)[b]
Hamakua Energy	97,524	153,699	8,127
Kanoelehua-Hill	17,132	172,456	1,428
Keahole	31,213	242,208	2,601
Puna	39,535	31,747	3,295
Combined	185,404	see note[a]	15,450

[a]Total combined CO_2e cap for all partnering facilities is 7,023,257 short tons.
[b]Monthly full CO_2e cap adjustment.

e. Individual GHG emission cap adjustments, affecting the total combined GHG emissions cap, shall only apply to partnering facilities on the island of Hawaii.
f. The permittee may exceed the adjusted individual GHG emissions cap as determined in Attachment II – GHG, Special Condition No. C.3.b, if the adjusted total combined GHG emission cap as determined in Attachment II – GHG, Special Condition No. C.3.c is met.
g. Alternate operating scenario records shall be maintained in accordance with Attachment II - GHG, Special Condition No. D.3.
h. The terms and conditions under each operating scenario shall meet all applicable requirements, including the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-204(h))

Section D. Monitoring and Record Keeping Requirements

1. GHG Emissions

For calculating CO_2e emissions to assess fees, determining compliance with the GHG emission caps, and quality assurance/quality control requirements, the permittee shall:

a. Monitor CO_2 mass emissions data for the stationary source combustion units listed in Attachment II - GHG, Special Condition No. A.1 in accordance with 40 CFR §98.34;
b. Estimate missing data in accordance with the applicable procedures in 40 CFR §98.35;

c. Determine the metric tons of CO_2, methane (CH_4), and nitrous oxide (N_2O) in accordance with calculation methodologies in 40 CFR §98.33;
d. Calculate the GHG emissions, expressed in metric tons of CO_2e, using Equation A-1 of 40 CFR §98.2;
e. Convert the metric tons of CO_2e emissions to short tons for monitoring and annual emissions reporting as applicable. For the conversion, one (1) short ton is equal to 0.90718474 metric tons;
f. Provide total actual CO_2e emissions in Item 1 of **Monitoring Report Form: GHG Emissions** to Hawaiian Electric **within thirty (30) days** after the end of each semi-annual calendar period (January 1 – June 30 and July 1 – December 31). The monitoring report form, with Item 1 emissions data, shall be signed and dated by a responsible official; and
g. Report CO_2e emissions to the Department in accordance with Attachment II - GHG Special Condition No. E.4.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90; §11-60.1-204d(6)(c); 40 CFR §98.2, §98.33, §98.34, §98.35)

2. Records

All records, including support information, shall be maintained for **at least five (5) years** from the date of the monitoring sample, measurement, test, report, or applications. Support information includes all maintenance, inspection, and repair records, and copies of all reports required by this permit. These records shall be true, accurate, and maintained in a permanent form suitable for inspection and be made available to the Department or authorized representative(s) upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

3. Alternate Operating Scenarios

a. The permittee shall contemporaneously with making a change from one operating scenario to another record in a log, the scenario under which it is operating.
b. The permittee shall maintain all records corresponding to the implementation of an alternate operating scenario.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

Section E. Notification and Reporting Requirements

1. Standard Condition Reporting

   Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 17 and 24, respectively:

   a. Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and
   b. Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.

   (Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90; SIP §11-60-10, SIP §11-60-16)[2]

2. Deviations

   a. Except as specified in Attachment II - GHG, Special Condition No. E.2.b, the permittee shall report in writing within **five (5) working days** any deviations from permit requirements, including those attributed to upset conditions, the probable cause of such deviations, and any corrective actions or preventive measures taken. Corrective actions may include a requirement for testing, or more frequent monitoring, or could trigger implementation of a corrective action plan.
   b. The permittee shall report, in writing, deviations from Attachment II – GHG, Special Condition No. C.1.c.v, the probable cause of such deviations, and any corrective actions or preventive measures taken. Corrective actions may include a requirement for testing, more frequent monitoring, or could trigger implementation of a corrective action plan. Reports shall be submitted within **sixty (60) days** following the end of each calendar year.

   (Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

3. Compliance Certification

   a. During the permit term, the permittee shall submit at least **annually** to the Department and U.S. EPA Region, 9, the attached **Compliance Certification Form** pursuant to HAR, Subsection 11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. For making this certification for the partnering facility conditions in Attachment II – GHG, the permittee is relying on information provided by other partners that these partners independently certify. The compliance certification shall include, at a minimum, the following information:

      i. The identification of each term or condition of the permit that is the basis of the certification;
      ii. The compliance status;
      iii. Whether compliance was continuous or intermittent;

iv. The methods used for determining the compliance status of the source currently and over the reporting period;
v. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification, including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act;
vi. Brief description of any deviations including identifying as possible exceptions to compliance any periods during which compliance is required and which the excursion or exceedances as defined in 40 CFR Part 64 occurred; and
vii. Any additional information as required by the Department, including information to determine compliance.

b. The compliance certification shall be submitted within **sixty (60) days after** the end of each calendar year and shall be signed and dated by a responsible official.
c. Upon the written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

4. Monitoring Reports

a. The permittee shall complete and submit **semi-annual** monitoring reports to the Department that provide the metric tons and short tons of CO_2e emitted by all partnering facilities, except that biogenic CO_2 shall be excluded from the total CO_2e emissions. All reports shall be submitted **within sixty (60) days after** the end of each semi-annual calendar period (January 1 – June 30 and July 1 – December 31). The following enclosed form, or equivalent form, shall be used for reporting and shall be signed and dated by a responsible official:

Monitoring Report Form: GHG Emissions

b. For calendar year 2019, the permittee shall report the CO_2e emissions **within sixty (60) days** after the issuance of this permit. The Monitoring Report Form: GHG Emissions, or equivalent form, for the 2019 calendar year shall be used for reporting and shall be signed and dated by a responsible official.
c. For calendar year 2020, the permittee shall report the CO_2e emissions **within sixty (60) days** after the issuance of this permit or **within sixty (60) days** after the end of the semi-annual calendar period, whichever is later. The Monitoring Report Form: GHG Emissions, or equivalent form, for the 2020 calendar year shall be used for reporting and shall be signed and dated by a responsible official.

d. Upon written request by the permittee, the deadline for submitting the monitoring report form may be extended, if the Department determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

Section F. Agency Notification

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

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[1]The citations to the CFR identified under a particular condition indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

[2]The citations to the State Implementation Plan (SIP) identified under a particular condition indicate that the permit condition complies with the specified provision(s) of the SIP.

ATTACHMENT III: ANNUAL FEE REQUIREMENTS
COVERED SOURCE PERMIT NO. 0214-01-C

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

The following requirements for the submittal of annual fees are established pursuant to HAR, Title 11, Chapter 60.1, Air Pollution Control. Should HAR, Chapter 60.1, be revised such that the following requirements are in conflict with the provisions of HAR, Chapter 60.1, the permittee shall comply with the provisions of HAR, Chapter 60.1.

1. Annual fees shall be paid in full:

   a. Within **one hundred twenty (120) days** after the end of each calendar year; and
   b. Within **thirty (30) days** after the permanent discontinuance of the covered source.

2. The annual fees shall be determined and submitted in accordance with HAR, Chapter 11-60.1, Subchapter 6.

3. The annual emissions data for which the annual fees are based shall accompany the submittal of any annual fees and submitted on forms furnished by the Department.

4. The annual fees and the emission data shall be mailed to:

State of Hawaii
Clean Air Branch
2827 Waimano Home Road, #130
Pearl City, HI 96782

ATTACHMENT IV: ANNUAL EMISSIONS REPORTING REQUIREMENTS
COVERED SOURCE PERMIT NO. 0214-01-C

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

1. Complete the attached form(s):

   Annual Emissions Report Form: Fuel Consumption

2. The reporting period shall be from January 1 to December 31 of each year. All reports shall be submitted to the Department within **sixty (60) days** after the end of each calendar year and shall be mailed to the following address:

   State of Hawaii
   Clean Air Branch
   2827 Waimano Home Road #130
   Pearl City, HI 96782

3. The permittee shall retain the information submitted, including all emission calculations. These records shall be in a permanent form suitable for inspection, retained for a minimum of five (5) years, and made available to the Department upon request.

4. Any information submitted to the Department without a request for confidentiality shall be considered public record.

5. In accordance with HAR, Section 11-60.1-14, the permittee may request confidential treatment of specific information, including information concerning secret processes or methods of manufacture, by submitting a written request to the Director of Health and clearly identifying the specific information that is to be accorded confidential treatment

COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0214-01-C
(PAGE 1 OF ___)

Amended Date: October 22, 2020

Expiration Date: May 15, 2013
(Expiration Date to be Revised Upon Permit Renewal)

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following certification at least annually, or more frequently, as requested by the Department.

(Make Copies of the Compliance Certification Form for Future Use)

For Period: _____ Date: _____

Company/Facility Name: _____

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

I certify that I have knowledge of the facts herein set forth that the same are true, accurate, and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by Department of Health as public record. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, and any permit issued thereof.

COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0214-01-C
(CONTINUED, PAGE 2 OF ___)

Amended Date: October 22, 2020 **Expiration Date:** May 15, 2013
(Expiration Date to be Revised Upon Permit Renewal)

The purpose of this form is to evaluate whether or not the facility was in compliance with the permit terms and conditions during the covered period. If there were any deviations to the permit terms and conditions during the covered period, the deviation(s) shall be certified as *intermittent compliance* for the particular permit term(s) or condition(s). Deviations include failure to monitor, record, report, or collect the minimum data required by the permit to show compliance. In the absence of any deviation, the particular permit term(s) or condition(s) may be certified as *continuous compliance*.

Instructions:

Please certify Sections A, B, and C below for continuous or intermittent compliance. Sections A and B are to be certified as a group of permit conditions. Section C shall be certified individually for each operational and emissions limit condition as listed in the Special Conditions section of the permit (list all applicable equipment for each condition). Any deviations shall also be listed individually and described in Section D. The facility may substitute its own generated form in verbatim for Sections C and D.

A. Attachment I, Standard Conditions

Permit term/condition	Equipment	Compliance
All standard conditions	All Equipment listed in the permit	☐ Continuous ☐ Intermittent

B. Special Conditions - Monitoring, Recordkeeping, Reporting, Testing, and INSIG

Permit term/condition	Equipment	Compliance
All monitoring conditions	All Equipment listed in the permit	☐ Continuous ☐ Intermittent
Permit term/condition All recordkeeping conditions	Equipment All Equipment listed in the permit	Compliance ☐ Continuous ☐ Intermittent
Permit term/condition All reporting conditions	Equipment All Equipment listed in the permit	Compliance ☐ Continuous ☐ Intermittent
Permit term/condition All testing conditions	Equipment All Equipment listed in the permit	Compliance ☐ Continuous ☐ Intermittent
Permit term/condition All INSIG conditions	Equipment All Equipment listed in the permit	Compliance ☐ Continuous ☐ Intermittent

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

C. Special Conditions - Operational and Emissions Limitations

Each permit term/condition shall be identified in chronological order using attachment and section numbers (e.g., Attachment II, B.1, Attachment IIA, Special Condition No. B.1.f, etc.). Each piece of equipment shall be identified using the description stated in Section A of the Special Conditions (e.g., unit no., model no., serial no., etc.). Check all methods (as required by permit) used to determine the compliance status of the respective permit term/condition.

Permit Term/Condition	Equipment	Method	Compliance
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent
		☐ monitoring ☐ recordkeeping ☐ reporting ☐ testing ☐ none of the above	☐ Continuous ☐ Intermittent

(Make Additional Copies if Needed)

COMPLIANCE CERTIFICATION FORM
COVERED SOURCE PERMIT NO. 0214-01-C
(CONTINUED, PAGE 4 OF ___)

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

D. Deviations

Permit Term/Condition	Equipment / Brief Summary of Deviation	Deviation Period time (am/pm) & date (mo/day/yr)	Date of Written Deviation Report to DOH (mo/day/yr)
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	
		Beginning: Ending:	

*Identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred.

(Make Additional Copies if Needed)

MONITORING REPORT FORM
GHG EMISSIONS
COVERED SOURCE PERMIT NO. 0214-01-C
(PAGE 1 OF 2)

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually.

(Make Copies for Future Use)

For Period: _____ Date: _____

Facility Name: _____

Location: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record. In making this certification for the partnering facility conditions in Items 2 and 3 of this form, I am relying on information provided by other partners that these partners independently certify.

Responsible Official (Print): _____

Title: _____

Responsible Official (Signature): _____

1. Report the CO_2e emitted by Kalaeloa Cogeneration Plant during each reporting period for purposes of the facility's individual GHG emissions cap:

Emission Year Reporting For _____					
Reporting Period	Kalaeloa Cogeneration Plant Emissions (Metric Tons of CO_2e)			Kalaeloa Cogeneration Plant Emissions (Total CO_2e)	
	CO_2 (Non-Biogenic)	CH_4	N_2O	Metric Tons	Short Tons
January 1 – June 30 (1st Semi-Annual Period)					
July 1 – December 31 (2nd Semi-Annual Period)					
Total Emissions →					

Provide the CO_2e emitted by Kalaeloa Cogeneration Plant in Item 1 above to HECO during each reporting period for purposes of calculating the total combined GHG emissions from the partnering facilities.

MONITORING REPORT FORM
GHG EMISSIONS
COVERED SOURCE PERMIT NO. 0214-01-C
(CONTINUED, PAGE 2 OF 2)

Amended Date: October 22, 2020 **Expiration Date: May 15, 2013**
(Expiration Date to be Revised Upon Permit Renewal)

In accordance with the HAR, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the following information semi-annually.

2. Report the total combined CO_2e emitted by all partnering facilities during each reporting period for purposes of the total combined GHG emissions cap for these facilities:

Emission Year Reporting For _____					
Reporting Period	Total Combined Emissions from All Partnering Facilities (Metric Tons of CO_2e)			Total CO_2e	
	CO_2 (Non-Biogenic)	CH_4	N_2O	Metric-Tons	Short Tons
January 1 – June 30 (1st Semi-Annual Period)					
July 1 – December 31 (2nd Semi-Annual Period)					
Total Emissions →					

3. For incidences when the individual cap for Kalaeloa Cogeneration Plant and total combined cap for all partnering facilities are exceeded, report the emissions in excess of the total combined cap using the following equation:

$$X = XG \frac{(A-C)}{\sum_{A_i>C_i}(A_i-C_i)} = \_\_\_\_\_$$

Where,

X = Adjusted portion in metric tons or short tons of GHG emissions that are in excess of total combined cap specified in Attachment II – GHG, Special Condition No. C.1.b. The equation applies to all affected facilities that do not meet the individual and total combined GHG emission caps specified in Attachment II – GHG, Special Condition Nos. C.1.a and C.1.b, respectively.
XG = Total combined actual GHG emissions from affected facilities minus total combined GHG emissions cap.
A = Actual GHG emissions from the affected facility.
C = GHG emissions cap for the affected facility.
$\sum_{Ai>ci}(Ai - Ci)$ = The sum of the difference between the actual emissions and cap emissions for all facilities that did not achieve the individual facility-wide GHG emissions cap.