



December 2, 2019

FILED

2019 DEC -2 P 2:43

PUBLIC UTILITIES
COMMISSION

The Honorable Chair and Members of the
Hawai'i Public Utilities Commission
Kekuanaoa Building, First Floor
465 South King Street
Honolulu, Hawai'i 96813

Dear Commissioners:

Subject: Hawai'i Electric Light Company, Inc.
Rebuild Agreement and PPA Negotiations with Puna Geothermal Venture
Quarterly Update

The Commission requested in its letter dated May 9, 2019 that Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light" or the "Company") keep the Commission updated quarterly, beginning on June 1, 2019, regarding the status of permits required for the Puna Geothermal Venture ("PGV") facility to come back online (including but not limited to those set forth in Exhibit D, PGV's Government Approvals, of Exhibit A (Rebuild Agreement) to the Company's March 8, 2019 letter) and status of negotiations of a restated PPA, and updated, as necessary, regarding any other relevant developments, until the Commission determines otherwise. In addition, the Commission issued Order No. 36484 on August 22, 2019, suspending the proceeding in Docket No. 2019-0119 until December 31, 2019, with the expectation that Hawai'i Electric Light provide information on an expected timeline for various permit approvals and substantive details on a renegotiated PPA. On October 4, 2019 the Commission issued Order No. 36573 Opening Docket No. 2019-0333 to facilitate its review of the amended and restated PPA between Hawai'i Electric Light and PGV and to have Hawai'i Electric Light file its application for approval in that docket. In response to the Commission's letter and Orders, Hawai'i Electric Light respectfully submits its quarterly report on relevant developments for the months of September, October, and November 2019.

Status of Permits

PGV has provided Hawai'i Electric Light with an update with regards to the status of PGV's permits as well as a revised Exhibit D, which is attached hereto as Attachment 1. In Summary, every permit required to operate the PGV facility remains and has remained without interruption in full force and effect and is active. PGV needs no other permit to resume operations of its facility.

a. **Geothermal Resource Permit (GRP 2).**

- This permit is issued, administered and enforced by the County of Hawai'i and governs the operation of PGV's facility.

- Regulatory oversight is by the County Planning Department.
- This permit remains in full force and effect and continues to be active.
 - Above and beyond, PGV has contracted the services of an acoustical engineer to perform several noise surveys. PGV plans to perform a minimum of three separate noise surveys. The first, which has been completed, was a base line survey prior to commencing restoration activities on the PGV site. The second survey will be performed during geothermal well drilling activities. The third noise survey will be performed after the facility has returned to operational status. The acoustical engineer will review the data collected and will provide a report at one of PGV's future scheduled Community Meetings.
 - Above and beyond, PGV provides weekly wellfield and plant activity updates to the Department of Land and Natural Resources, Hawai'i County (Planning and Civil Defense departments respectively), Hawai'i Department of Health Clean Air Branch, Hawai'i Department of Health Safe Drinking Water Branch for Underground Injection Control, Hawai'i Department of Health Noise Branch and the United States Environmental Protection Agency Clean Water Branch for Underground Injection Control.

b. County Building Permits.

- PGV's three Air Quality Monitoring Stations received Final Plan Approval permits from the Planning Department on July 22, 2019. All three Monitoring Station permits received electrical permit approvals on November 14, 2019. PGV's electrical contractor is coordinating with Hawai'i Electric Light to make the final electrical connections between Hawai'i Electric Light distribution system and the PGV Monitoring Stations. The permits for the structures are under review by the Department of Public Works at the Structural division. All three Monitoring Stations have been in full operation on a 24/7 basis and are compliant with DOH Clean Air Branch permit requirements. Noise levels, hydrogen sulfide emissions, wind direction, wind speed and rainfall are the primary elements being monitored. For the Department of Health, Clean Air Branch's Noncovered Source permit with PGV, hydrogen sulfide (H₂S) and noise levels are the two primary elements of interest. Particulate matter emissions are monitored during drilling activities.
 - Above and beyond, all three Monitoring Stations are equipped with Sulfur Dioxide (SO₂) monitoring capabilities. This is not a Clean Air Branch permit requirement. However, PGV voluntarily installed SO₂ monitoring as a result of the post eruption residual emissions that are still active. There are still numerous fissures continuing to emit SO₂ and H₂S.
 - Above and beyond, PGV has installed backup generators that provide power to the Monitoring Stations in the event that the UPS battery systems malfunction or use up all of their battery storage capacity. The backup generators are not a DOH permit requirement, but an additional safety and reliability measure to keep the Monitoring Stations in operation at all times.
 - Above and beyond, PGV has provided internet access to the noise and H₂S data recorded at the three Monitoring Stations. This information can currently

be accessed from the Ormat website www.ormat.com or more directly by typing in the IP address 107.85.101.148/pgvpublic/. Having this data made available to the public is not a DOH requirement. PGV voluntarily provides this data to anyone interested in the interest of safety and transparency.

- PGV's Grading and Grubbing permit for the facility driveways and the substation earthwork was received on December 7, 2018. This permit remains active as bulldozing, rock crushing and grading continues.
- PGV's substation rebuild for the civil, mechanical and electrical work was submitted to the Planning Department on November 22, 2019 for "Plan Approval". After receiving Plan Approval, PGV will submit documents to the Department of Public Works for engineering reviews and approval.

c. Plan Of Operation (POO).

- This permit is approved, administered and enforced by the State Department of Land and Natural Resources ("DLNR") for the operation of all geothermal wells.
- Regulatory oversight resides within the DLNR Engineering Department.
- This permit remains in full force and effect and continues to be active.

d. Well Permits - Geothermal Wells. Several permits for maintenance and drilling of specific geothermal wells have been issued by DLNR and each remains in full force and effect and is active.

- KS-14 well maintenance ACTIVE since 12/21/2018
 - Maintenance workover was completed at the end of October. Production well KS-14 is available for operations.
- KS-9 well maintenance ACTIVE since 4/5/2019
- KS-16 well maintenance ACTIVE since 4/5/2019
- KS-15 well maintenance ACTIVE since 7/16/2019
 - Maintenance workover is completed and Reinjection well KS-15 is available for operations.
- KS-13 well maintenance ACTIVE since 7/20/2019
 - Ormat's primary drill rig (Rig 1) is currently mobilized on KS-13 and in the midst of performing well maintenance.
- KS-18 drilling (new well) ACTIVE since 8/9/2019
 - Drilling commenced in late October and PGV is currently at about 700 feet deep.
- KS-17 drilling (new well) ACTIVE since 8/19/2019

e. Well Permits - Groundwater Wells. Two groundwater wells have also been permitted through DLNR's Commission on Water Resource Management and each remains in full force and effect and is active.

- MW-4 new water well Active since 6/11/18

- MW-5 new water well Active since 3/8/19 Ormat's workover drill rig (Rig 4) is currently being mobilized to MW-5 in preparation to start drilling PGV's second water well.
- Above and beyond, PGV holds bi-weekly status update conference calls with onsite DLNR representative and DLNR staff personnel from Honolulu.

f. Non-Covered Source Permit (NSP) No. 0008-02-N.

- This permit is issued, administered and enforced by the Hawai'i State Department of Health ("DOH") for the operation of the PGV's facility.
- Regulatory oversight resides within the Clean Air Branch.
- This permit remains in full force and effect and is active.

g. Non Covered Source Permit (NSP) No. 0008-03-N.

- This permit is issued, administered and enforced by the DOH for the operation of the PGV's wellfield.
- Regulatory oversight resides within the Clean Air Branch.
- This permit remains in full force and effect and is active.

h. Underground Injection Control (UIC) Permit No. UH-1529.

- This permit is issued, administered and enforced by the DOH for the operation of PGV's reinjection wells.
- Regulatory oversight resides within the Safe Drinking Water Branch.
- This permit remains in full force and effect and is active.

i. Underground Injection Control (UIC) HI 596002.

- This permit is issued, administered and enforced by the U.S. Environmental Protection Agency Region IX for the operation of PGV's reinjection wells.
- Regulatory oversight resides within the Clean Water Branch of DOH.
- This permit remains in full force and effect and is active.

Status of PGV's work and Test Energy:

Please see PGV's August 2019 Progress Report related to Force Majeure Event dated September 27, 2019, attached as Attachment 2 hereto.

In addition, please refer to PGV's November 8, 2019 letter to the Commission in Docket No. 2019-0119. In this letter PGV states:

PGV is pleased to report that it has not only recovered power plant equipment, but at a large cost PGV also has recovered several

reinjection wells that are now available for operation. In addition, PGV recently recovered one of the six geothermal production wells available to PGV. With the completion of recovery of the first production well this month, PGV is now able to start up several generating units for testing and commissioning. Due to the transmission line limitations, generation will be limited to about 3 MW, but will allow PGV to test all of the generating units on a rotational basis, and to have them ready to commence operations as soon as the HELCO switching station and transmission system are rebuilt.

At PGV's request to begin testing of their generating equipment, Hawai'i Electric Light has agreed to accept test energy through the existing distribution 12.47 kV line currently interconnected to PGV's facility, while Hawai'i Electric Light continues to rebuild Transmission Lines and the Pohoiki Substation. PGV will not be compensated for test energy under this configuration, generation will be limited to maximum 3 MW export, and agreed to certain terms and conditions as stated in a letter agreement dated November 6, 2019. This letter agreement is provided to the Commission as an informational filing, as Attachment 3.

Status of Rebuilding of Transmission Lines

As a result of the Commission's directives in the May 9, 2019 letter, the Company immediately ceased work on the transmission lines and filed an Application for Approval to Construct 69 kV Overhead Transmission Line Segments to Reconnect the PGV facility on June 7, 2019 (see Docket No. 2019-0119). In this application, Hawai'i Electric Light proposed to construct certain 69 kilovolt overhead transmission line segments necessary to reconnect the PGV generating facility to the Company's electric system. Although this Docket has been suspended, the Company continues to prepare for such work. During this quarter, the Company ordered the steel poles, which have a long-lead time, and which PGV has paid for 100% of the cost of the poles.

Status of Rebuilding of Pohoiki Switching Station

In addition to rebuilding the overhead transmission line segments, the Company must also rebuild the Pohoiki Switching Station that was destroyed during the 2018 Kilauea eruptions. The Company continued its work on procuring long-lead materials and contracting the CSA work for the Pohoiki Switching Station. PGV provided advance payment for this work. . The Company's engineering consultant will apply for plan approval with the County of Hawai'i..

Community Outreach

Exhibit E of the Rebuild Agreement provided PGV's extensive Community Outreach Plan. During this quarter, PGV conducted its community meetings on September 18, 2019 and November 13, 2019, with presenters from PGV, the Company and the County of Hawai'i. PGV provided updates of the project and were available to answer questions from the community.

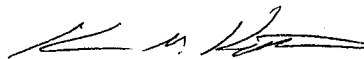
Status of Negotiations of a Restated PPA

As noted in the rebuild agreement prior to the 2018 volcanic eruption in the Kilauea Lower East Rift Zone, PGV and Hawai'i Electric Light were in discussions to amend and restate the power purchase agreement ("PPA") with PGV for a proposed PGV repowering project that will consist of decommissioning the older original equipment and installing new more efficient equipment. As part of these discussions, PGV proposed to consolidate all contracts into one contract, while de-linking the energy price from the price of oil. It was contemplated that the new contract would take effect after Commission approval and after the new equipment has been installed and placed into Commercial Operation.

As noted in the last quarterly report, these contract negotiations are not a result of the 2018 Kilauea eruptions or damage caused by such eruptions and the equipment to be installed as part of this amendment is not anticipated to be done as part of the Kilauea eruption repair work or return to service. The rebuild agreement and current restorations efforts described above are to restore the existing generating equipment under the existing contracts and pricing. This work is needed because the current PPA with PGV is valid through December 31, 2027 and the Company needs the overhead transmission line and Pohoiki substation in place in order to receive energy from the PGV facility as required under the PPA. During this quarter the parties continue to make progress in negotiating pricing and terms for an amended and restated PPA with the intent to execute and file no later than the end of 2019 for Commission review and approval under Docket No. 2019-0333.

The Company appreciates this opportunity to update the Commission on the status of PGV related to both the rebuild and operations of the facility and PPA renegotiations. The Company will continue to update the Commission as progress continues and looks forward to successfully bringing PGV back into service and restoring a valuable renewable resource to the Company's grid. Please contact Sharon Hirai at (808) 969-0428 should you have any questions regarding this matter.

Sincerely,



Kevin M. Katsura
Director
Regulatory Non-Rate Proceedings

Enclosures

cc: Division of Consumer Advocacy

EXHIBIT D – GOVERNMENTAL APPROVALS**[November 29, 2019]**

Each of the permits listed is in full force and effect and is active, and no further action or approval is required by Puna Geothermal Venture to start up the facility.

Government Agency	County of Hawaii Planning Commission	State of Hawaii Department of Land and Natural Resources (DLNR)	State of Hawaii Department of Health Clean Air Branch (HDOH - CAB)	State of Hawaii Department of Health Safe Drinking Water Branch	United States Environmental Protection Agency (EPA) Region IX
Permit	Geothermal Resource Permit (GRP 2)	Plan of Operation (POO)	Non Covered Source Permits (NSP) No. 0008-02-N (Power Plant) & No. 0008-03 (Wellfield)	Underground Injection Control (UIC) UIC Permit No. UH-1529	Underground -Injection Control (UIC) HI 596002
Status/Scope	Active, primarily for land use issues. Allows Facility to increase up to 60 MW	Active, primarily for wellfield development and maintenance. As of 1/17/06, allows development of up to 28 Wells and up to 60 MW.	Active, Primarily Air Quality for a 41 MW Nominal Power Plant & Wellfield	Active, regulates injection of fluids	Active, Regulates injection of fluids



9/27/2019

Hawaii Electric Light Company, Inc.
Sharon Suzuki, President
1200 Kilauea Avenue
Hilo, Hawaii 96720-4295

Delivery by email and mail

Dear Mrs. Suzuki:

Subject: August 2019 Progress Report related to Force Majeure Event

References:

Power Purchase Contract For Unscheduled Energy Made Available from A Qualifying Facility dated March 4, 1986, as amended ("1986 PPA")

Power Purchase Agreement between Puna Geothermal Venture ("PGV") and Hawaii Electric Light Company, Inc. dated February 7, 2011 ("2011 PPA") PGV Notice of Force Majeure of May 30, 2018 ("PGV Notice of Force Majeure")

Rebuild Agreement Between Puna Geothermal Venture and Hawai'i Electric Light Company, Inc. dated March 7, 2019

The plant remained offline for the month of August 2019 due to the lava intrusion.

Plant personnel met with HELCO on August 1st, 2019, and August 15th, 2019 to discuss the ongoing work required to restore the Pohoiki Switching Station and transmission lines.

PUNA GEOTHERMAL VENTURE

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This month the plant made progress in its ability to return to service. There is ongoing well work with the KS-14 cleanout. Rig 4 will be removed to KS-15. The plant is performing leak testing on the OECs. Separators at KS 9, 10, and 11 were all inspected and reassembled. Turbine work was conducted on OEC 31 and 32. Grading work continues in the area between E-pad and the Expansion unit. The KS-18 and KS-17 Drilling revised permits were received.

In August, Ormat drilling engineers & Plant personnel briefed regulatory personnel on Oahu and Hawaii Island about plans to drill two new wells, KS-18 and KS-17 respectively. Participants on Oahu include DLNR, DOH Clean Air Branch, DOH Noise Branch, DOH Safe Drinking Water Branch and one representative from EPA Region 9 Clean Water Branch. KS-18 is designated as a production well while KS-17 would be an injection well. Participants on Hawaii Island included the Mayor's Office, Civil Defense, Planning Department, Police Department and the Fire Department.

Sincerely,



Evan Warner
Asset Manager



SHARON M. SUZUKI
President

November 6, 2019

VIA US MAIL AND EMAIL (jhara@ormat.com)

Mr. Jordan Hara
Plant Manager
Puna Geothermal Venture
P. O. Box 30
Pahoa, Hawai'i 96778

Dear Mr. Hara:

Re: Letter Agreement Between Hawai'i Electric Light Company, Inc. and Puna Geothermal Venture ("Letter Agreement") - Acceptance of Test Energy

Reference is made to that certain: (1) Purchase Power Contract For Unscheduled Energy Made Available From A Qualifying Facility dated March 24, 1986, as amended ("Original PPA"), between Hawaii Electric Light Company, Inc. ("Company") and Puna Geothermal Venture ("PGV") and (2) Power Purchase Agreement between Company and Seller dated February 7, 2011 ("Expansion PPA"), collectively ("PPAs"). Company and PGV are collectively referred to as "Parties" and individually as a "Party".

On May 30, 2018, PGV provided Company with a Notice of Force Majeure Event resulting from the eruption in the Kilauea Lower East Rift Zone ("Volcanic Activity"), which rendered PGV's facility incapable of performing certain obligations under the PPAs. On June 22, 2018, Hawai'i Electric Light provided PGV with a Notice of Force Majeure Event due to the same Volcanic Activity overrunning certain Company-owned facilities, i.e. Pohoiki Switching Station and 8700 and 6500 lines, and PGV property. On March 7, 2019, the Parties entered into a Rebuild Agreement which set forth the respective responsibilities and certain cost obligations associated with the restoration of their respective facilities pursuant to the terms and conditions of this Rebuild Agreement. Each Party is pursuing efforts with reasonable diligence to eliminate the impacts of their respective Force Majeure Events pursuant to the terms of the Rebuild Agreement.

This letter is in response to PGV's request that the Company accept test energy from the PGV facility through the existing distribution 12.47 kV line currently interconnected to PGV's facility for the purpose of testing generating equipment and associated systems ("Test Energy"). Please be advised the Company is amenable to accepting Test Energy from PGV's facility through the distribution 12.47 kV line subject to the following terms and conditions:

Mr. Jordan Hara
Puna Geothermal Venture
November 6, 2019
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1. **Commencement of Test Energy:** Beginning on the Effective Date PGV may deliver Test Energy through the Company's Kapoho substation 12.47 kV distribution line.
2. **Maximum Capacity:** The maximum amount of net Test Energy export over the distribution 12.47 kV line at any time **shall** not exceed 3 MW.
3. **Scheduled Operation:** Delivery of Test Energy from the Facility shall be in accordance with an hourly operating schedule that shall be determined on a week to week basis, where each week is defined as 12:00:01 am on Sunday to 12:00:00 midnight on Saturday. Seller and Company shall mutually agree upon the hourly operating schedule no later than the close of the business day (4:00 pm) on Wednesday of the week prior to the week to which the schedule will apply. The hourly operating schedule shall define the amount of power, in megawatts (up to 3 MW maximum), that PGV may deliver to Company.
4. **No Compensation:** PGV shall not be entitled to any compensation, i.e., Capacity Payment or Energy Charge, for any Test Energy that is transmitted to the Company pursuant to this Letter Agreement.
5. **Term and Termination:** This Letter Agreement shall remain in effect until regulatory approval is obtained to deliver energy from PGV's Facility through a transmission line that is proposed to serve the PGV Facility. Either Party may terminate this Letter Agreement at any time with 30 calendar days written notice.
6. **Required Mitigation:** The Company shall determine, in its reasonable discretion, what mitigations and/or improvements ("Mitigations") to the Company system are necessary in order to accept Test Energy through the distribution 12.47 kV line. Such Mitigations shall include but are not limited to:
 - Voltage regulator and installation: \$9,110.00
 - Control and Monitoring Scheme/Equipment: \$3,000.00
7. **Disconnection of PGV's Facility Delivery of Test Energy:** The Company shall have the right, in its reasonable discretion, to disconnect PGV's facility from the Company's system to cease Test Energy delivery without notice and at any time. Under no circumstances shall PGV reclose into the Company's System without first obtaining specific approval to do so from the Company's System Operator. The generating facility may be disconnected by the Company as described at the facility location or remotely by supervisory control, if available.

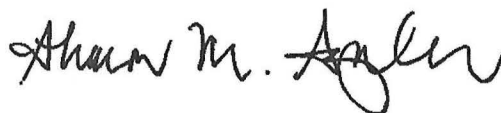
Mr. Jordan Hara
Puna Geothermal Venture
November 6, 2019
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8. **Commission Notice:** This Letter Agreement shall be **filed** with the Commission as an informational filing.
9. **Effective Date:** This Letter Agreement shall be effective upon the date accepted and signed by PGV.

Except as otherwise expressly provided herein with respect to Test Energy, the execution of this Letter Agreement shall not in any manner modify the Parties' respective rights and obligations under the PPAs.

Please acknowledge your agreement and acceptance of the foregoing by signing below and returning a signed copy back to me at the address above. If you have any questions, please do not hesitate to call Dave Okamura at 808-969-0329.

Sincerely,



ACKNOWLEDGED AND AGREED:

Puna Geothermal Venture

By: 

Signature

Name: Jordan Hara

Print

Title: Plant Manager

cc: Michael Kaleikini (Ormat)
Brendan Bailey (Hawaiian Electric)
Dave Okamura (Hawai'i Electric Light)
Sharon Hirai (Hawai'i Electric Light)