



LAND USE COMMISSION  
STATE OF HAWAII

2021 JUL -6 A 9:50

ROBERT C. ISLER  
Vice President  
Power Supply

June 24, 2021

Mr. Daniel E. Orodener  
Executive Officer  
Land Use Commission  
State of Hawaii  
P.O. Box 2359  
Honolulu, Hawaii 96804-2359

Dear Mr. Orodener:

Re: Petition for Land Use Commission District Boundary Amendment for Property situated at Wailuku and Makawao Districts, Maui, Hawaii; Maui Electric Company, Limited; LUC Docket No. A97-722; TMK 3-8-03:23 and 24

Enclosed is the Twenty-Third Annual Report of Hawaiian Electric<sup>1</sup> (original and one copy).

We would appreciate receiving a file stamped copy of the above. Enclosed is a stamped, self-addressed envelope for this purpose.

Thank you for your consideration and assistance in this matter.

Sincerely yours,

Isler,  
Robert

Digitally signed by  
Isler, Robert  
Date: 2021.06.24  
13:07:39 -10'00'

Enclosures

cc. Mary Alice Evans - Office of State Planning (Director)  
Michele Chouteau McLean - County of Maui Planning Department (Director)  
Daniel E. Orodener - Land Use Commission (Executive Officer), pdf version

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<sup>1</sup> Hawaiian Electric Company, Inc., Maui Electric Company, Limited, and Hawai'i Electric Light Company, Inc. ("Company" or "Companies") are each doing business as "Hawaiian Electric" and have jointly registered "Hawaiian Electric" as a trade name with the State of Hawai'i Department of Commerce and Consumer Affairs, as evidenced by Certificate of Registration No. 4235929, dated December 20, 2019.

TWENTY-THIRD ANNUAL REPORT OF HAWAIIAN ELECTRIC

and

CERTIFICATE OF SERVICE

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of	)	
	)	Docket No. A97-722
Maui Electric Company, Limited, a	)	
Hawaii corporation	)	
	)	
To Amend the Agricultural Land Use	)	
District Boundary into the Urban	)	
Land Use District for Approximately	)	
65.7 acres of Land at Wailuku and	)	
Makawao Districts, Island of Maui,	)	
State of Hawaii, Tax Map Key No.	)	
3-8-03:23 and 24	)	
_____	)	

TWENTY-THIRD ANNUAL REPORT OF HAWAIIAN ELECTRIC

TO THE HONORABLE LAND USE COMMISSION OF THE STATE OF HAWAII:

COMES NOW HAWAIIAN ELECTRIC, a Hawaii corporation, Petitioner herein, and pursuant to Condition No. 14 of the Findings of Fact, Conclusion of Law, and Decision and Order issued on June 22, 1998, hereby submits to the State Land Use Commission its twenty-third annual report of compliance with the conditions established by said approval as follows:

### General Progress on the Project from June 2020 to May 2021:

On August 22, 2019, Hawaiian Electric issued a Request for Proposals (RFP) for Variable Renewable Dispatchable Generation and Energy Storage, Island of Maui. The intent of the RFP was to procure sufficient energy and capacity resources to enable the retirement of the Kahului Generating Station (KGS) and to continue progress toward the State's 100% renewable energy goal. Hawaiian Electric's Waena site was offered to developers as a potential site as part of the RFP. On May 8, 2020 the Company made the final bid selection, which included a 40 MW Battery Energy Storage System (BESS) at the Waena site to be built, owned, and operated by Hawaiian Electric. Information on the RFPs can be found at the Hawaiian Electric website: <https://www.hawaiianelectric.com/competitivebidding>, and information on the Waena BESS project at: <https://www.hawaiianelectric.com/selfbuildprojects>. Maui Electric Company filed an Application with the Hawai'i Public Utilities Commission seeking approval to execute the Waena BESS project on September 8, 2020, and the project is under consideration by the Commission under Docket 2020-0132. Information on the subject Docket can be found at <https://puc.hawaii.gov/>.

In addition to the Waena BESS project, Hawaiian Electric is also planning to construct a new 69kV system switchyard on an approximate three-acre portion of the Waena site. The proposed switchyard is required to retire KGS. In addition, the switchyard will serve as the interconnection point for the Waena BESS. Subject to PUC approval, construction of the switchyard is estimated to begin in approximately February 2022, with a target completion date of December 2022.

### FEASIBILITY OF ALTERNATE ENERGY SOURCES:

1. Kaheawa Wind Power:

This 30 MW wind farm is on-line and has been supplying electric power to Hawaiian Electric - Maui County since June 2006.

2. Kaheawa Wind Power II:

This 21 MW wind farm is on-line and has been supplying electric power to Hawaiian Electric – Maui County since July 2012.

3. Makila Hydro:

This 500 KW hydroelectric plant came on-line in September 2006 but has operated intermittently at times due to operational challenges. On February 16, 2019, Makila Hydro notified Hawaiian Electric of their decision to cease operations after the Commission on Water Resource Management's adoption of

the Interim Instream Flow Standards, which made continued operations unviable. The Makila Hydro, LLC Power Purchase Contract for As-Available Energy with Hawaiian Electric - Maui County was terminated on July 1, 2019.

4. Auwahi Wind Energy:

This 21 MW wind farm on Ulupalakua Ranch is on-line and has been supplying electric power to Hawaiian Electric – Maui County since December 2012.

5. Biomass and Biofuels:

Hawaiian Electric continues to monitor potential biofuels for use in the Company's generating units. In 2007 an initial short-term biodiesel test was successfully completed on several internal combustion engines and a combustion turbine at Ma'alaea Generation Station ("MGS"). In 2011 Hawaiian Electric – Maui County completed a long-term biodiesel demonstration on its diesel engine generating unit M12, which demonstrated successful utility-scale long-term operation using 100% biodiesel. A project report was submitted to the Commission in January 2012. The Company continues to use biodiesel during start-up and shut-down operations in two of its largest diesel fuel generating units at MGS.

6. Hydroelectric/Pumped Storage Hydroelectric ("PSH"):

Following the termination of the PPA with Hawaiian Commercial and Sugar Company ("HC&S") the companies entered into a Standard Interconnection Agreement ("SIA") for 4.51 MW of Hydro Electric generation at the HC&S facility.

7. Grid Integration:

- a. Demand Response ("DR") refers to mechanisms designed to manage customer consumption of electricity to support the reliable operation of the grid. Hawaiian Electric plans to utilize DR to meet capacity and other grid service requirements. In the regular course of planning, the Company identified a projected reserve capacity shortfall starting in 2017. As one of the solutions to mitigate this deficit, Hawaiian Electric filed a request to expand the Fast DR Program in an effort to expedite the procurement of capacity DR on Maui. Fast DR represents a key component, available in the near term, of Hawaii Electric's larger proposed portfolio of measures "to help mitigate increasing reserve capacity shortfalls that are anticipated to arise on the Company's Maui island system." On July 17, 2017, the Commission approved of the request to expand the Fast DR Program from the currently approved 0.2 MW total load amount to a total load amount of 5 MW. As of this filing, 3MW of customer load has been enabled for participation in the Demand Response Program. The Company will continue towards completing the remaining enablement for Fast DR this calendar year.
- b. Additionally, in February 2017, the Company filed an application to establish a portfolio of DR programs to meet various system requirements. The portfolio was approved on January 25, 2018 through Decision & Order 35238. Hawaiian

Electric negotiated 2.4MWs of capacity load with an aggregator for Maui. The budget request to proceed with the contracted aggregator was approved by the Commission on August 9, 2019 and onboarding of customers is currently underway. Due to COVID19, the onboarding has been delayed and the aggregator is working on providing an updated timeline.

On July 9, 2020, under Docket No. 2007-0341, the Companies requested approval for cost recovery for the executed GSPA contracts negotiated in RFP No. 103119-02 ("GSPA2"). The company executed GSPA2 contracts with two aggregators ("GSPA2 Aggregators") July 7 and 9, 2020. The GSPA2 Aggregators are contracted to enable 7.9MW of load by 2025.

8. Photovoltaic:

- a. The Customer Grid Supply Plus ("CGS+" or "GSP") and Smart Export ("ISE") programs went into effect on February 20, 2018. These programs were developed to further expand customer options and integrate systems configured to provide grid-supportive functionality. As of May 12, 2021, 455 Conditional Approvals were issued for CGS+ of which 308 systems have been executed, and 557 Conditional Approvals issued for ISE of which 282 have been executed.

A third program, Net Energy Metering Plus ("NEM+" or "NMP") went into effect on October 22, 2018. This program was developed to allow current NEM customers to add non-export capacity to their home or business without affecting their NEM status. As of May 12, 2021, 277 Conditional Approvals were issued of which 153 systems have been executed.

- b. Phase 1 of the Community Based Renewable Energy ("CBRE") program opened on July 11, 2018 with program capacities individually set for each island. As of mid-May 2020, one Maui project has passed the technical reviews and is approved for installation. This project represents 25.75kW of the 1,000kW Maui island program capacity. Unused capacity from Phase 1 for each island has been added to the Phase 2, Tranche-1. Phase 2 will have two tranches and be divided into RFP projects and small projects for Maui island. Phase 2, Tranche-1 total allocated capacity for Maui (including the unused portions from Phase 1) included 12.5 MW for Large RFP projects and 3.475 MW for small projects.
- c. The existing Customer Grid Supply ("CGS") program has enabled 1,275 photovoltaic systems totaling 11.42 MW, and the existing Customer Self Supply ("CSS") program has enabled 478 photovoltaic systems totaling 3.78 MW to be integrated into the grid as of May 12, 2021.
- d. The Net Energy Metering ("NEM") program has enabled 11,090 photovoltaic systems totaling 85.07 MWs to be integrated into the grid as of May 12, 2021. Customers already interconnected under NEM will be allowed to continue under this program. Those customers given pre-approval under the NEM program are

actively working to interconnect their projects. No new customers are being accepted under the NEM program.

- e. Hawaiian Electric – Maui County’s large customers utilize the Standard Interconnection Agreement (“SIA”) to interconnect PV and offset their energy use. As of May 13, 2020, 20MWs have been installed under this program. These customers include the County of Maui’s wastewater treatment facilities in Kihei and Lahaina. Customers participating in this program design their PV system to offset their existing load and do not receive credit for surplus energy exported to Hawaiian Electric.
  - f. The Feed-in Tariff (“FIT”) program focused on ‘shovel ready’ projects and is closed to new applications. As of April 30, 2021, approximately 5.66 MWs of PV have been interconnected. There is one final 1.0 MW project in development.
9. South Maui Renewable Resources:

This 2.87 MW photovoltaic facility is on-line and has been supplying renewable electric energy to Hawaiian Electric – Maui County since May 2018. The First Amendment to the PPA was executed March 29, 2019 to reflect the Assignment of the PPA from South Maui Renewable Resources to SSA Solar of Hawaii 3.
  10. Ku’ia Solar:

This 2.87 MW photovoltaic facility is on-line and has been supplying renewable electric energy to Hawaiian Electric – Maui County since October 2018. The First Amendment to the PPA was executed on March 29, 2019 to reflect the Assignment of the PPA from Ku’ia Solar to SSA Solar of Hawaii 2.
  11. AES Kuihelani:

Hawaiian Electric received approval from the Commission on March 25, 2019 for a 60 MW photovoltaic project coupled with a 60 MW / 240 MWh battery energy storage system located near the Kuihelani Highway in central Maui. This project is one of two projects secured through the competitive bidding process in Stage 1 of the Renewable Dispatchable Generation RFP. The First Amendment to the PPA was executed January 31, 2021 to reflect the results of the Interconnection Requirements Study. The project schedule has been extended as the developer addresses community input; the updated project schedule shows an in-service date of October 2023.
  12. Paeahu Solar:

Hawaiian Electric received approval from the Commission on October 5, 2020 for a 15 MW photovoltaic project coupled with a 15 MW / 60 MWh battery energy storage system located near Maui Meadows in South Maui. This project is one of two projects secured through the competitive bidding process in Stage 1 of the Renewable Dispatchable Generation RFP. The First Amendment to the PPA was executed August 7, 2020 to reflect the results of the Interconnection Requirements

Study. Currently, the project is scheduled to be in-service in the second Quarter of 2023.

13. Pulehu Solar:

On September 15, 2020, Hawaiian Electric submitted an application to the Hawaii Public Utilities Commission (PUC) seeking approval of the Power Purchase Agreement for Renewable Dispatchable Generation (PPA) executed by Maui Electric and Pulehu Solar, LLC for the 40-MW photovoltaic project paired with energy storage. This project is one of four projects secured through the competitive bidding process in Stage 2 of the Renewable Dispatchable Generation RFP. The project will be located in Pulehu, on the island of Maui and is scheduled to be in service in the second quarter of 2023.

On April 14, 2021, the PUC issued Decision and Order No. 37731 approving the Pulehu Solar PPA.

14. Kahana Solar

On September 15, 2020, Hawaiian Electric submitted an application to the Hawaii Public Utilities Commission seeking approval of the Power Purchase Agreement for Renewable Dispatchable Generation (PPA) executed by Maui Electric and Kahana Solar, LLC for the 20-MW photovoltaic project paired with a 80 MWh battery energy storage system. This project is one of four projects secured through the competitive bidding process in Stage 2 of the Renewable Dispatchable Generation RFP. The PUC provided a procedural schedule for the project and a Decision and Order on the project is expected in late-2021. The project will be located in Napili-Honokowai, on the island of Maui and is scheduled to be in service in the fourth Quarter of 2023.

15. Kamaole Solar

On February 16, 2021, Hawaiian Electric submitted an application to the Hawaii Public Utilities Commission (PUC) seeking approval of a Power Purchase Agreement for Renewable Dispatchable Generation (PPA) executed by Maui Electric and Kamaole Solar LLC for a 40-MW photovoltaic project paired with energy storage. This project is one of four projects secured through the competitive bidding process in Stage 2 of the Renewable Dispatchable Generation RFP. The project will be located in Kihei on the island of Maui and is scheduled to be in service in the second quarter of 2023.

Report on Compliance with Conditions Imposed by the Land Use Commission

The following states whether the conditions in the Land Use Commission approval have been met:

1. Petitioner shall participate in an air quality monitoring program, coordinated with and approved by DOH to monitor air quality impacts attributable to the operations of the Waena Generating Station. Mitigation measures for air quality impacts attributable to the operations of the Waena Generating Station shall be implemented by Petitioner if, based on applicable State and Federal air quality standards, the results of the monitoring program warrant them. Mitigation measures shall be developed in coordination with DOH and implemented by Petitioner.

Petitioner understands its obligation to comply with this condition.

2. Petitioner shall consult with DOH and, if necessary, Petitioner shall participate in a groundwater quality monitoring program in consultation with the county Department of Water and approved by DOH to monitor groundwater quality impacts directly attributable to the operations of the Waena Generating Station. Petitioner shall implement mitigation measures should the results of the monitoring program warrant them based on applicable State and Federal water quality standards. Mitigation measures shall be developed in coordination with DOH and implemented by Petitioner.

Petitioner understands its obligation to comply with this condition.

3. Petitioner shall provide at its own expense, adequate non-potable water source, storage, and transmission facilities and improvements to accommodate the proposed project. The non-potable water improvements shall meet all applicable County, State, and Federal