



SHARON M. SUZUKI  
President  
Maui County & Hawai'i Island Utilities

LAND USE COMMISSION  
STATE OF HAWAII

2020 JUL -6 A 10:08

June 25, 2020

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-Second 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,

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-SECOND 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-SECOND 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-second annual report of compliance with the conditions established by said approval as follows:

### General Progress on the Project from June 2019 to May 2020:

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: [www.hawaiianelectric.com/selfbuildprojects](http://www.hawaiianelectric.com/selfbuildprojects).

In addition to the Waena BESS project, Hawaiian Electric is also planning to construct a new 69kV system switchyard on an approximate 1-3 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 January 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 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 – Maui County 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 the Company'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 approved 0.2 MW total load amount to a total load amount of 5 MW. As of this filing, 4.9MW of customer load has been enabled for participation in the Demand Response Program.
- 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 filed with the Commission and approved on August 9, 2019. At the time of this filing, the aggregator has started enabling customers to achieve the implementation of 2.4MW.
- c. In partnership with the Hawaii Natural Energy Institute, Hawaii Electric installed a 2MW/397kWh battery on Molokai in June 2016. The purpose of the battery is

to help explore how energy storage may be used to address high PV penetration impacts on the system. The initial control algorithm, research and development work was completed in April 2017 and the battery system was brought online to provide frequency response support. To date, the battery system has provided frequency support through multiple events, avoiding under frequency load shedding and the loss of service to customers. System testing and adjustments to the control algorithm are ongoing and will continue for three years, scheduled to end in November 2020.

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 31, 2020, 327 Conditional Approvals were issued for CGS+ of which 163 systems have been executed, and 246 Conditional Approvals issued for ISE of which 26 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 31, 2020, 97 Conditional Approvals were issued of which 50 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 Maui, Molokai, and Lanai. As of May 31, 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. On Molokai, 250kW of the 500kW total program capacity, has been awarded to a project that has not yet received approval for installation. The 500kW Lanai program capacity was not utilized. Unused capacity from Phase 1 for each island has been added to the Phase 2, Tranche-1 capacities. Phase 2 will have two tranches and be divided into RFP projects and small projects for Maui island, and small projects only for Molokai and Lanai islands. Phase 2, Tranche-1 total capacities (including the unused portions from Phase 1) are as follows: Maui island RFP program capacity 12.5MW and small project program capacity 3.475MW, Lanai island small project program capacity 3.0MW, and Molokai small project program capacity 2.75MW.
- c. The existing Customer Grid Supply (“CGS”) program has enabled 1,105 photovoltaic systems totaling 9.93 MW, and the existing Customer Self Supply (“CSS”) program has enabled 365 photovoltaic systems totaling 2.87 MW to be integrated into the grid as of May 31, 2020.
- d. The Net Energy Metering (“NEM”) program has enabled 11,635 photovoltaic systems totaling 88.29 MWs to be integrated into the grid as of May 31, 2020. 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 31, 2020, 17.4MWs 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 May 31, 2020, 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 project is scheduled to be in-service during the fourth quarter of 2022.

12. Paeahu Solar:

On December 31, 2018 Hawaiian Electric submitted an application to the PUC 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 PUC provided a procedural schedule for the project and a Decision and Order on the project is expected in mid-2020. Currently, the project is scheduled to be in-service in the fourth Quarter of 2022.

13. Request for Proposals for Variable Renewable Dispatchable Generation and Energy Storage (RFP):

In addition to the 40MW BESS to be built at the Waena site (described on page 1 of this report), three solar-plus-storage projects also made the final bid selection on May 8, 2020 after a competitive evaluation that is part of the largest renewable energy procurement ever undertaken in Hawaii. Hawaiian Electric will now enter contract negotiations with the selected developers, who will begin outreach to the communities where they plan to build. The name, location, developer, technology, size and estimated completion dates are listed on the Hawaiian Electric renewable project status board at [www.hawaiianelectric.com/statusboard](http://www.hawaiianelectric.com/statusboard), as well as links to each project's individual website. The four Maui projects in total represent approximately 100 MW of generation and 560 MWh of storage. All contracts must be approved by the PUC.



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

standards and shall be consistent with the County of Maui adopted water use and development plan.

Petitioner understands its obligation to comply with this condition.

4. Petitioner shall consult with DOH and, if necessary, prepare a wastewater disposal plan subject to review and approval by DOH. Petitioner shall provide at its own expense adequate wastewater treatment, transmission and disposal facilities for wastewater directly attributable to the operations of the Waena Generating Station.

Petitioner understands its obligation to comply with this condition.

5. Petitioner shall establish appropriate systems to contain spills and prevent materials associated with heavy industrial uses attributable to the operations of the Waena Generating Station, such as petroleum products, chemicals or other pollutants, for leaching or draining into above ground or subsurface storm drainage collection areas. Based on applicable State and Federal standards, Petitioner shall use best management practices to minimize non-point source pollution into irrigation ditches. Petitioner shall consult with DOH and County Department of Public Works and Waste Management and obtain any permits required or construct improvements required for storm water discharge on the Property.

Petitioner understands its obligation to comply with this condition.

6. Petitioner shall consult with DOH regarding hazardous waste storage and, if necessary, prepare a hazardous waste storage plan.

Petitioner understands its obligation to comply with this condition.

7. Petitioner shall participate in the funding and construction of local and regional transportation improvements and programs attributable to the operations of the Waena

Generating Station as determined by the State Department of Transportation (DOT) and the County of Maui.

Petitioner understands its obligation to comply with this condition.

8. Petitioner shall coordinate with the surrounding property owner to ensure that the proposed project will not adversely impact the use of cane haul roads and irrigation ditches or adversely impact the continued agricultural operation of adjoining sugar cane cultivation areas.

Petitioner understands its obligation to comply with this condition.

9. Petitioner shall participate in the pro rata funding and construction of adequate civil defense measures as determined by the State of Hawaii and County of Maui civil defense agencies.

Petitioner understands its obligation to comply with this condition.

10. Petitioner shall implement effective soil erosion and dust control measures during and after construction in compliance with the applicable rules and regulations of DOH and the County of Maui.

Petitioner understands its obligation to comply with this condition.

11. Should any human burials or any historic artifacts, such as charcoal deposits, stone platforms, pavings or walls be found, Petitioner shall stop work in the immediate vicinity and contact the State Historic Preservation Division (SHPD). The significance of these finds shall then be determined and approved by the SHPD and, if applicable, an acceptable mitigation plan shall be approved by the SHPD. The SHPD must verify that the fieldwork portion of the mitigation plan has been successfully executed prior to work

proceeding in the immediate vicinity of the find. Burials must be treated under specific provisions of Chapter 6E, HRS.

Petitioner understands its obligation to comply with this condition.

12. Petitioner shall develop the Property in substantial compliance with the representations made to the Commission. Failure to so develop the Property may result in reversion of the Property to its former classification, or change to a more appropriate classification.

Petitioner understands its obligations to comply with this condition.

13. Petitioner shall give notice to the Commission of any intent to sell, lease, assign, place in trust, or otherwise voluntarily alter the ownership interests in the Property, prior to development of the Property.

Petitioner understands its obligation to comply with this condition.

14. Petitioner shall timely provide without any prior notice, annual reports to the Commission, the Office of Planning, and the County of Maui Planning Department in connection with the status of the subject project and Petitioner's progress in complying with the conditions imposed herein. The annual report shall be submitted in a form prescribed by the Executive Officer of the Commission.

Petitioner understands its obligation to comply with this condition.

Petitioner has filed Annual Reports with the Commission since 1999 and submits this Twenty-Second Annual Report in compliance therewith.

15. The Commission may fully or partially release the conditions provided herein as to all or any portion of the Property upon timely motion and upon the provision of adequate assurance of satisfaction of these conditions by Petitioner.

Petitioner understands the Commission's authority in this condition.

16. Within 7 days of the issuance of the Commission's Decision and Order for the subject reclassification, Petitioner shall (a) record with the Bureau of Conveyances a statement that the Property is subject to conditions imposed herein by the Commission in the reclassification of the Property, and (b) shall file a copy of such recorded statement with the Commission.

(a) Petitioner has recorded a Notice of Imposition of Conditions by the Land Use Commission pursuant to Commission Rule Section 15-15-92. The notice was dated June 25, 1998 and recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 98-094602.

(b) A copy of the notice was transmitted to the Commission on July 1, 1998.

17. Petitioner shall record the conditions imposed herein by the Commission with the Bureau of Conveyances pursuant to Section 15-15-92 Hawaii Administrative Rules.

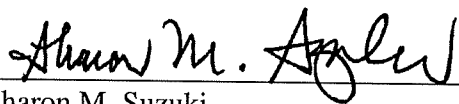
Petitioner has recorded a Document Listing Conditions to Reclassification of Land pursuant to Section 15-15-92 of the State of Hawaii Land Use Commission Rules. The document was dated July 23, 1998 and recorded in said Bureau of Conveyances as Document No. 98-112111. A copy of the document was transmitted to the Commission on August 4, 1998.

Conclusion

Efforts to comply with the remaining conditions shall begin when required as part of a permit requirement for construction.

Dated: Kahului, Hawaii, June 25, 2020.

HAWAIIAN ELECTRIC  
Petitioner

By:   
Sharon M. Suzuki  
President, Maui County & Hawai'i Island Utilities

CERTIFICATION OF SERVICE

I hereby certify that due service of a copy of the within document will be made by depositing the same with the U.S. mail, postage prepaid, within (5) days of the date on this report, addressed to:

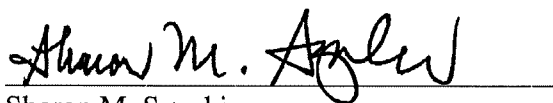
MARY ALICE EVANS  
Director  
Office of State Planning  
State of Hawaii  
P.O. Box 2359  
Honolulu, Hawaii 96804

BY MAIL

MICHELE CHOUTEAU MCLEAN  
Director  
County of Maui Planning Department  
2200 Main Street  
One Main Plaza Building, Ste 315  
Wailuku, Hawaii 96793

BY MAIL

Dated: Kahului, Hawaii, June 25, 2020.



Sharon M. Suzuki

President

MAUI COUNTY & HAWAII ISLAND UTILITIES

