March 4, 2024

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

Dear Commissioners:

Subject: Docket No. 2022-0212 – Innovative Pilot Process
Hawaiian Electric Responses to PUC-HECO-IRs 06-09

Hawaiian Electric[1] encloses for filing the Company's responses to PUC-HECO-IRs 06-09, which the Commission issued in this proceeding on February 27, 2024, and a certificate of service.

Sincerely,

/s/ Aki Marceau

Aki Marceau
Director,
Electrification of Transportation

Enclosures

[1] Hawaiian Electric Company, Inc., Hawai‘i Electric Light Company, Inc., and Maui Electric Company, Limited are collectively referred to as "Hawaiian Electric" or the "Company."

PUC-HECO-IR-06

Reference: Letter From: A. Marceau To: Commission Re: Docket No. 2022-0212 – Innovative Pilot Process; Hawaiian Electric Response to PUC-HECO-IR-05, filed on February 22, 2024.

In response to PUC-HECO-IR-05, Hawaiian Electric states that as a result of higher than expected "outside services engineering costs," it will be reducing the number of pilot sites from 30 to 20 sites.

a. Please describe the impacts that this may have on the operation of the pilot.
b. Have the Companies undertaken any analysis or study regarding how this reduction in available sites may impact the benefits conveyed to customers? If so, what are the expected impacts?
c. What do the Companies envision would be the minimum number of participants needed to meet the goals and objectives of the pilot?

Hawaiian Electric Response:

a. The reduction in sites will result in a smaller sample size of sites and charging stations compared to the original Application target to collect data from and develop learnings to inform future programs. However, considering the Pilot is a new endeavor that the Company did not have previous experience with, the Pilot will still produce meaningful insights to meet the Pilot objectives and inform future programs. The Company will continue to collect significant data on costs, participation, scheduling, charger utilization, customer feedback, and lessons learned. This will inform Pilot objectives including, among other things, better understanding of customer needs and behaviors, including better understanding of the process to support commercial customers in the installation of EV charging infrastructure. See the Company's Application, Objective 2A, page 13, and the Company's response to PUC-HECO-IR-09. See also the Company's responses to parts b. and c.

b. The Company has not undertaken a formal analysis or study regarding how this reduction in sites may impact the benefits conveyed to customers. The reduction in sites reduces the

total overall sample size as discussed in part a., but continues to provide benefits to the Company and its customers. The Pilot will still produce meaningful insights that will meet the Pilot objectives, inform future EV programs, and provide EV charging infrastructure throughout the state to accelerate the electrification of vehicles.

As explained in the Company's response to PUC-HECO-IR-05, outside services engineering costs for site evaluation and design were higher than expected, impacting the potential number of sites that could be covered under the approved cost cap of $4.98 million. The Company selected proposals for outside services engineering based on costs and expertise, in order to deliver the greatest value to the Pilot. The original 30 sites were a target used to develop the requested Pilot cost cap in the Application, leveraging work conducted in 2020 as part of the eBus Make-Ready Infrastructure Pilot Project in Docket No. 2020-0098. As explained in the Company's response to CA-IR-9, part a., in Docket No. 2020-0202, "developing project cost estimates are difficult without knowing the unique characteristics of a given location. For example, one project may be located very close to an existing transformer which would result in lower costs versus a project located further away from the nearest transformer. Therefore, make-ready project costs can have a wide range of variability. The Estimated Pilot Costs shown in Table [2] was based on a reasonable scope of work for a single unknown proxy site."[1] Based on the updated costs, the Company currently estimates that 20 sites could be accommodated within the approved cost cap. As submitted in the Company's response to PUC-HECO-IR-05, the estimated total cost for 20 sites is $4.89 million.

[1] *See* Hawaiian Electric Responses to Consumer Advocate's Information Requests, filed March 25, 2021, in Docket No. 2020-0202.

Optimally, there would be more sites allowed for under the program budget to benefit customers; nevertheless, part of the purpose of the Pilot is to learn what it costs to provide for the make-ready infrastructure and use this knowledge for the development of future projects.

c. The Company believes that even with the reduction in the anticipated number of sites, the Pilot still meets all objectives. The current enrollment of 11 participants will already meet all Pilot objectives. Nonetheless, the Company is actively seeking to enroll the maximum number of participants within budget as every additional participant will add to the comprehensiveness of findings.

The Pilot objectives from the Application are as follows:

- Objective 1A: Learn how to streamline workflows to scale infrastructure development and maintenance on both the utility-side and customer-side of the meter. This Pilot will complement the eBus Pilot by providing the Company with better understanding of the customer-side of the meter and specific experience with EV charging projects on the utility-side of the meter, to prepare the Company for future EV programs.
- Objective 1B: Improve understanding of resource needs for make-ready infrastructure deployment for different commercial customer segments. The Pilot is available for commercial customers, including workplaces, fleets, multi-unit dwellings, and commercial destinations, and will provide learning opportunities for the Company about the different EV charging needs across the commercial sector.
- Objective 1C: Track costs of make-ready infrastructure on the utility and customer side of the meter across different customer types throughout the Company's service territories to develop sound cost estimates for future deployment. Accurate cost estimates, that are specific to Hawai‘i and the Company's customers, will be essential for the development of a broader program in the future to provide further offerings that support electrification of transportation.
- Objective 2A: Understand customer needs and behaviors. The process of supporting commercial customers in the installation of EV charging infrastructure on the utility and customer side of the meter will help the Company better understand customer needs, electrification planning, and barriers. Many commercial property owners are interested in installing EV charging stations for their customers, fleets, or tenants, but the associated infrastructure presents a significant upfront capital investment and is often a barrier to deployment. The Pilot will help address the investment barrier by assisting customers with the initial make-ready infrastructure costs of EV charging.

- Objective 2B: Drive customers to electrify their light-duty vehicles faster than originally planned. Hawaiian Electric envisions that in its role as a trusted advisor, it will assist and support customers with their electrification plans, thereby helping customers transition more quickly than in a baseline scenario. If more EV charging stations are available, more drivers will feel comfortable in switching to an EV.
- Objective 2C: Increase customer awareness of EVs and the benefits of charging from the grid through market education and outreach.
- Objective 3A: Increase participation in the EV-J and EV-P tariffs. Customer sites that participate in the Pilot will be required to enroll in the proposed EV-J and EV-P tariffs (if approved).
- Objective 3B: Encourage vehicle charging during the mid-day, when solar energy is available. The proposed EV-J and EV-P tariffs offer a lower cost period from 9:00am to 5:00pm, so participation on these rates and response to this price signal will help integrate daytime solar.[2]

As noted previously, the Pilot meets all program objectives listed above, including in particular, improving the understanding of resource needs for different types of commercial customers as described in Objective 1B; learning what the actual cost are in Hawai'i related to EV make-ready infrastructure for the development of a broader future program offering as described in Objective 1C; and better understanding customer needs including the investments required to deploy make-ready infrastructure as described in Objective 2A.[3]

[2] *See* Application at 12-14.
[3] *See also* the Company's response to PUC-HECO-IR-09.

PUC-HECO-IR-07

Reference: Letter From: A. Marceau To: Commission Re: Docket No. 2022-0212 – Innovative Pilot Process; Proposed Modifications to Charge Ready Hawai'i Pilot Terms and Conditions, filed on January 10, 2024 ("Proposed Modification Letter").

In the Proposed Modification Letter, Hawaiian Electric states that the proposed modifications to the pilot will "enable increased Pilot participation" and refers to "several Hawaii Island hotels" as examples of customers with primary meters who may enroll in the pilot if the modifications are approved.

More specifically, Hawaiian Electric states that it "will install a non-utility sub-meter for the primary-meter customers and require these customers to provide monthly readings, which will capture total EV charging energy consumption to supplement charging session data."

a. Including the referenced "Hawaii Island hotels," how many additional participants do the Companies expect will enroll in the pilot if the modifications are approved?
b. Of the total number of pilot participants, how many do the Companies anticipate will be primary meter customers?
c. If the modifications are approved, please explain if and how these modifications change or impact the original goals and objectives of this pilot.
d. If the number of pending qualified/eligible applications would result in more than 20 sites, please describe how the decision will be made for the final selections.
e. Do the Companies expect that these modifications will allow for use of all 20 pilot sites?
f. If the proposed modifications are not approved, how many total pilot participants are the Companies anticipating?
g. If the proposed modifications are approved, how will the primary-metered participants provide monthly readings to Hawaiian Electric? Can this process be automated? Will there be a penalty to the participant for not providing information by a certain time?
h. Have the Companies examined if other jurisdictions have encountered this issue regarding the pilot infrastructure and primary-metered customers? If so, what were the outcomes?

Hawaiian Electric Response:

a. If the proposed modifications are approved, the Company anticipates two additional participants will enroll, inclusive of the Hawai'i Island Hotels. The Company is also currently evaluating a pool of new non-primary metered applicants. In total, the Company estimates an additional seven to nine participants beyond the current 11 executed Participation Agreements, leading to an anticipated total 18-20 participants for the Pilot.

b. Of the total number of Pilot participants, the Company anticipates that two customers will be primary metered. As discussed in the response to part a., the Company is currently evaluating new applicant sites (i.e., new applicant sites not limited to the two interested primary-metered Hawai‘i Island Hotels). The total number of participants will depend upon the feasibility of the new applicant sites and the customers' willingness to accept the Pilot terms and conditions. The Company anticipates a total of 18-20 sites to participate in the Pilot.

c. The proposed modifications do not impact the original goals and objectives of this Pilot. The proposed modifications allow for more participants which would help meet the goals and objectives of this Pilot.

As discussed in the response to PUC-HECO-IR-02, filed on February 20, 2024, the Company would gain Pilot participation from Hawai'i Island, where the Company has not executed a Participation Agreement to date. The Company will collect EV charging session data captured by participants' charging equipment whether or not a participant is primary metered. Primary-metered customers will additionally provide total EV charging energy consumption from the non-utility sub-meter that will supplement the EV charging session data, giving the Company insight into the sites' overall utilization, total energy consumption, and estimated revenue. The data collected from primary-metered customers will provide the Company insight into driver's charging habits at a different type of property (i.e., hotels). The Company will collect time-of-use interval data from all Pilot participants, enabling the Company to collect data on customer response to price signals. The non-collection of customer response to price signals would be limited to the two primary-metered participants.

d. If there are more than 20 qualified applicants, participant selection will be based on several factors, including, but not limited to, the following:

- Basic eligibility requirements;
- Overall complexity and cost of the project;
- Challenges and opportunities associated with each site; and
- Score received on the Charge Up Commercial Preliminary Scorecard[1]

e. If approved, the modifications would allow for two primary-metered, Hawai'i Island hotels to participate, leading to an anticipated 18-20 total Pilot participants.

f. If the modifications are not approved, the Company anticipates a total of 16-18 total Pilot participants. As discussed in the response to parts a. and b., above, this will depend upon the feasibility of the new non-primary metered applicant sites and the customers' willingness to accept Pilot terms and conditions.

g. If the modifications are approved, the primary-metered participants will manually report sub-meter readings to the Company. This process cannot be automated. The penalty for not providing or complying with the data requirements will not change for primary-metered customers. For every month the Participant fails to provide or comply with the data requirements the Company may, at its sole discretion, either: (i) toll the data-sharing commitment period on a month-for-month basis; or (ii) assess to the Participant liquidated damages in an amount equal to $700.

h. The Company did not find any primary-metered related issues when researching other utilities' make-ready programs.

[1] *See* Final Program Design Report, Exhibit J, filed September 23, 2022, in Docket No. 2020-0202.

PUC-HECO-IR-08

Reference: Letter From: A. Marceau To: Commission Re: Docket No. 2022-0212 – Innovative Pilot Process; Hawaiian Electric Responses to PUC-HECO-IRs 01-04, filed on February 20, 2024.

In response to PUC-HECO-IR-04, Hawaiian Electric provides a table (Table 1) reflecting the status of completed applications. Table 1 indicates that approximately 44 applications were either declined or withdrawn and, to date, 11 have been accepted.

In light of the challenges with finding eligible and willing pilot participants, have the Companies' contemplated changes to the goals and objectives of this pilot? If so, please explain these changes.

Hawaiian Electric Response:

The Company has not contemplated changing the goals and objectives of this Pilot because the learnings to date meet the primary purposes/objectives of the Pilot outlined in the Application and Charge Up Commercial Handbook:

- Install Make-Ready Infrastructure to support the installation of Charge Up Commercial charging equipment.
- Enable and accelerate the electrification of vehicles in Hawaiian Electric's service area.
- Improve renewable energy integration through EV charging via commercial EV rates.[1]

Changing the goals and objectives is unnecessary for completing the Pilot since in accordance with Section II.B.5. on pages 8-9 of the approved Pilot Process, "[t]he Pilot Update will include reporting on challenges and lessons learned, process improvements, a listing of performance relative to all key metrics, and any future permanent implementation plans based on an evaluation against the metrics established."[2]

[1] *See* Application, filed December 4, 2020, at 12-13, and Final Program Design Report, Exhibit A – Charge Up Commercial Handbook, filed September 23, 2022, at 2.
[2] *See* Hawaiian Electric Companies' Proposed Pilot Process, filed April 30, 2021, and Order No. 37865, Approving the Hawaiian Electric Companies' Pilot Process, issued July 9, 2021, in Docket No. 2018-0088.

PUC-HECO-IR-09

Reference: Docket No. 2022-0202, Decision and Order No. 38194, filed on January 24, 2022 at 50-51 (including n. 106).

In approving the Charge Ready Hawai‘i pilot, the Commission stated that the pilot would be subject to the Innovative Pilot Process, including annual reporting.

a. Please describe what metrics and/or criteria the Companies intend to use to measure the success of the pilot.
b. Against what target or baseline will the pilot's performance be measured?

Hawaiian Electric Response:

a. The Company intends to use the metrics listed in Table 1 below. These metrics were originally filed in response to the Consumer Advocate's comments on the Final Program Design Report.[1] The metrics in Table 1 incorporate reporting items from Decision and Order No. 38194 ("D&O 38194"), specifically, metrics and reporting items on:

   - Actual costs of the Pilot, including costs that were previously unidentified, with an explanation as to whether those costs were likely anomalies or would be expected to be necessary in future iterations of the program;
   - Lessons learned from project deployment, including ways to improve economics and efficiencies, and reduce costs; and
   - EV charging data that would enable analysis on charger utilization and the feasibility of developing a minimum usage and or managed charging condition.

   See D&O 38194, reporting items 1, 2, and 4, at 45-46.[2]

[1] *See* Hawaiian Electric's Response to Consumer Advocate's Final Program Design Report Comments, filed November 23, 2022, in Docket No. 2020-0202, at 4-6.
[2] In accordance with D&O 38194, the Company will report on all five items listed in D&O 38194 at pages 45-46 in the Final Report.

Table 1. Data Collection and Reporting Metrics

Category	Metric
Actual Pilot Cost	• Total Pilot expenses by island • Total Pilot expenses by site • Pilot expenses for utility-side infrastructure upgrades • Tracking of revenues • Previously unidentified costs with an explanation of whether they are anomalies or expected to occur in future iterations of the pilot
Participation	• Number of applications received • Number of site evaluations conducted • Number of Participation Agreements executed • Number and type of charge stations – at time of application • Number of make-ready sites completed • Number and type of commissioned charge stations • Number of charging ports
Schedule	• Duration from completed application to executed agreement • Duration from executed agreement to commissioned charging equipment
Data Collection	• Quantity of data files received versus the quantity expected • Service area ○ per type

Charger Utilization	• Charging sessions
	  ○ Total number of sessions by customer type (e.g., fleet, MUD, etc.)
	• Energy Consumption
	  ○ Total kWh per island
	  ○ Total kWh per participant
	  ○ Total kWh by time-of-use period
	  ○ Average kWh per charge session
	• Demand
	  ○ Average kW per charge session
	• Average monthly billed kW

Customer Feedback	• Survey or discussion regarding
	  ○ Enrollment process
	  ○ Communication
	  ○ Collaboration
	  ○ Design and build phase
	  ○ Charge selection and installation
	  ○ Data collection
	  ○ Plans to install distributed energy resources

Lessons Learned	• Opportunities to improve implementation • Opportunities to improve economics and efficiencies • Opportunities to reduce costs

In addition, in establishing the Pilot Process, Decision and Order No. 37507 ("D&O 37507") discussed that the purpose of the Pilot Process is "to foster innovation by establishing an expedited implementation process for pilots that test new technologies, programs, business models, and other arrangements. This is intended to support initiatives by the Companies to test new programs and ideas quickly and elevate any successful pilots for consideration of full-scale implementation."[3,4]

Objectives of the Pilot include:

- Learn how to streamline workflows to scale infrastructure development and maintenance on both the utility-side and customer-side of the meter.
- Improve understanding of resource needs for make-ready infrastructure deployment for different commercial customer segments.
- Track costs of make-ready infrastructure on the utility and customer side of the meter across different customer types throughout the Company's service territories to develop sound cost estimates for future deployment.
- Understand customer needs and behaviors. The process of supporting commercial customers in the installation of EV charging infrastructure on the utility and customer side of the meter will help the Company better understand customer needs, electrification planning, and barriers.
- Drive customers to electrify their light-duty vehicles faster than originally planned.

[3] D&O 37507, filed December 23, 2020, in Docket No. 2018-0088, at 166.
[4] Although the Company's Pilot Application was filed on December 4, 2020, prior to the finalization of the Pilot Process, the Charge Ready Hawai'i Pilot (Docket No. 2020-0202) was incorporated into the Pilot Process. *See* D&O 37507 at 172-173, n.282.

- Increase customer awareness of EVs and the benefits of charging from the grid through market education and outreach.
- Increase participation in the EV-J and EV-P tariffs.
- Encourage vehicle charging during the mid-day, when solar energy is available.[5]

A primary purpose of the Pilot is to explore a new concept, testing the deployment of make-ready infrastructure for commercial customers, and as listed above, Pilot objectives include learning new processes, including learning how to streamline workflows and better understand resource and customer needs for consideration of a larger scale program offering. Since the Pilot is a new endeavor, there is no previously established baseline to measure Pilot performance against.

The Company intends to measure Pilot performance qualitatively relative to learning objectives, including the Customer Feedback and Lessons Learned metrics in Table 1, and quantitatively relative to the quantifiable metrics listed in Table 1, e.g., Pilot Participation and Charger Utilization. However, there is no predetermined target performance to measure against as make-ready infrastructure deployment is a new concept not previously done before.

b. See the response to part a., above.

[5] *See* Application at 12-14.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document, together with this Certificate of Service, were duly served on the following party, by electronic mail service as set forth below:

Michael S. Angelo
Executive Director
Division of Consumer Advocacy
Department of Commerce and Consumer Affairs
mangelo@dcca.hawaii.gov
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DATED: Honolulu, Hawai‘i, March 4, 2024.

/s/ Kyle Kawata
Kyle Kawata
HAWAIIAN ELECTRIC COMPANY, INC.