DIVISION OF CONSUMER ADVOCACY
Department of Commerce and
Consumer Affairs
335 Merchant Street, Room 326
Honolulu, Hawaii 96813
Telephone: (808) 586-2800

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of	)	
	)	
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2018-0088
	)	
Instituting a Proceeding to Investigate Performance-Based Regulation.	)	

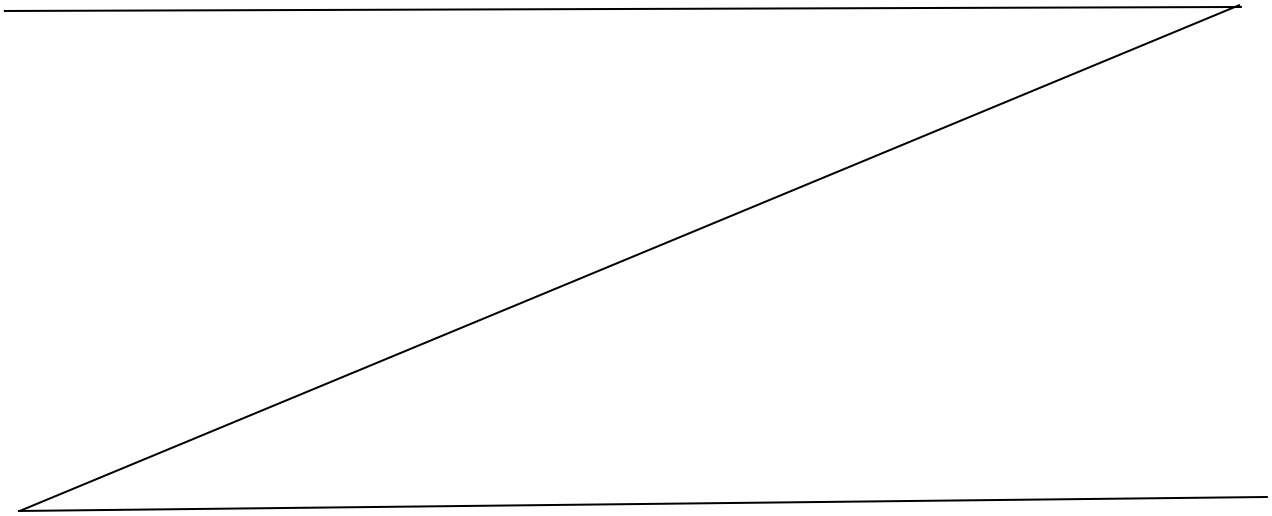
DIVISION OF CONSUMER ADVOCACY'S
PHASE 5 OPENING BRIEF

Pursuant to the Hawaii Public Utilities Commission's ("Commission") Order No. 41639 Establishing a Briefing Schedule for Phase 5 of the Comprehensive Evaluation of the Performance-Based Regulation ("PBR") Framework, issued on April 4, 2025 ("Order No. 41639" or "Phase 5 Briefing Order"), the Division of Consumer Advocacy ("Consumer Advocate") provides its Opening Brief for Phase 5 of the instant proceeding and offers the following comments and recommendations.

I. OVERVIEW.

A. SCOPE OF THE OPENING BRIEF.

Through Order No. 41639, the Commission invited the Parties[1] to offer initial evaluations of the Companies'[2] performance and the performance of the PBR Framework[3] during the first four years of MRP1,[4] in support of transitioning to the next phase of the comprehensive review. The PBR Framework established the goals and outcomes shown in Table 1 ("PBR Goals and Outcomes").[5]



[1] The parties to the proceeding are Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Ltd., (who will be collectively referred to as "Companies" or "Hawaiian Electric Companies"), City and County of Honolulu, County of Hawaii, Blue Planet Foundation ("Blue Planet"), the DER Parties (which collectively refers to DER Council of Hawaii, Hawaii PV Coalition, and Hawaii Solar Energy Association), Life of the Land ("LOL"), and Ulupono Initiative ("Ulupono").

[2] The "Hawaiian Electric Companies" or "Companies" are Hawaiian Electric Company, Inc. ("Hawaiian Electric"), Hawaii Electric Light Company, Inc. ("Hawaii Electric Light"), and Maui Electric Company, Limited ("Maui Electric").

[3] Decision and Order No. 37507 was filed on December 23, 2020, and established the Performance Based Regulation ("PBR") Framework ("PBR Framework" or "Framework").

[4] "MRP1" refers to the first multi-year rate period established in the Framework.

[5] The Commission established the regulatory principles, goals, and outcomes for the PBR Framework and used in Phase 4 of the instant proceeding in Decision and Order No. 36326, filed May 23, 2019 ("D&O 36326").

Table 1. PBR Framework Goals and Outcomes

Goal	Regulatory Outcome	
Enhance Customer Experience	*Traditional*	Affordability
		Reliability
	Emergent	Interconnection Experience
		Customer Engagement
Improve Utility Performance	*Traditional*	Cost Control
	Emergent	DER Asset Effectiveness
		Grid Investment Efficiency
Advance Societal Outcomes	*Traditional*	Capital Formation
		Customer Equity
	Emergent	GHG Reduction
		Electrification of Transportation
		Resilience

More recently the Commission issued its "2024 Inclinations on the Future of Energy in Hawaii",[6] in which it offered a "roadmap" to, "guide and track, from now until the end of the decade, the completion of urgent and substantial energy infrastructure upgrades for public safety, reliability and resiliency[.]"[7] The Commission emphasized that, "Extraordinary investment will be required to accomplish these essential, transformative improvements,"[8] and noted that, it is "acutely aware of the capital constraints caused by the impact of wildfire related liabilities on Hawaiian Electric's credit

6 The Commission issued its "2024 Inclinations on the Future of Energy in Hawaii," on December 31, 2024 ("2024 Inclinations").

7 2024 Inclinations, at 2.

8 Ibid.

rating, Hawaii's exceptionally high electric rates and other economic headwinds."[9] The Commission further emphasized that, "it cannot be overstated that investing now will save lives and money in the short and long run . . . "[10] (emphasis in original).

The Consumer Advocate strongly agrees that the safety of utility customers and the public is a paramount and fundamental expectation for any utility providing service. The Consumer Advocate also strongly emphasizes the fundamental expectation that utility service be highly reliable and resilient, affordable, provided cost-effectively and equitably. Further, it is essential that the Companies are sufficiently progressing toward achieving the State's clean energy and environmental goals.

As we continue on this pathway, the Consumer Advocate cannot overstate the importance of achieving these system objectives *cost effectively*. This is imperative because Hawaii has the highest average electricity bills for residential service and second highest average bills in the nation for commercial service as well as industrial service.[11] Put simply, this costliness is unacceptable and represents a significant strain on Hawaii's residential customers and businesses.

As discussed below, the Companies need to do more to monitor safety, improve reliability, and prioritize making their services more affordable by making priority investments to incorporate more renewable generation, cost effectively. The Consumer Advocate also believes that establishing more robust guardrails and increased

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9 Ibid.

10 Ibid.

11 Data compiled by U.S. Energy Information Administration ("U.S. EIA") for 2023 and provided in Data Tables: T5.a (residential), T5.b (commercial), and T5.c. (industrial) available at https://www.eia.gov/electricity/sales_revenue_price/.

scrutiny of the Companies' performance on an on-going and recurring basis, through assessing certain key metrics and through revision to and refinement of certain performance incentive mechanisms ("PIMs"), can help ensure that the Companies' investments are sufficiently prioritizing and achieving acceptable levels of performance in the aforementioned service domains.

To that end, the Consumer Advocate notes that the PBR Framework includes several stakeholder-driven goals and outcomes that support those fundamental components of service and includes various metrics that can help with monitoring and measuring whether sufficient priority is being given to ensure that customers are receiving service that is sufficiently safe, reliable and resilient, and affordable, and that the Companies are making sufficient progress toward the state's renewable energy and climate goals. The Consumer Advocate also views the Commission's 2024 Inclinations together with the Companies' Integrated Grid Plan and planning process as foundational high-level planning documents that help lay a roadmap for moving toward delivering that level of service, and the Competitive Procurement Bidding Process, with potential additional refinements, as one means for procuring generation that is more modern and cost effective compared to traditional fossil fuel-based generation.

It is the Consumer Advocate's understanding that the evaluations and recommendations collected through this briefing process may be used to establish a scope for this next phase, and to prioritize the focus of the review on specific mechanisms and outcomes. While all goals and outcomes of the PBR Framework are important, the Consumer Advocate has elected to focus on selected objectives and associated PBR mechanisms to reflect key policy priorities of the Commission's vision for the PBR

framework and key focus areas of the Consumer Advocate. This brief thus focuses on the objectives of cost control, the transition to renewables, reliability, and safety; related discussion is provided on the multi-year rate plan ("MRP") and Annual Revenue Adjustment ("ARA"), Energy Cost Recovery Clause ("ECRC"), Collective Shared Savings Mechanism ("CSSM"), and PIMs.

To support the discussion in this brief, the Consumer Advocate has included a technical report ("Hawaiian Electric Companies Under PBR: 2021-2024") with this brief that includes more detailed review of the available data on Hawaiian Electric's performance during MRP1.

B. SUMMARY OF FINDINGS

The task of evaluating the Companies' performance and the performance of PBR mechanisms during MRP1 represents a challenge: this comprehensive review is a venture into uncharted regulatory waters, with no obvious precedents from other jurisdictions for a *comprehensive* evaluation of PBR. The Consumer Advocate therefore offers only preliminary findings in this brief and notes the need for additional data and analysis, which should occur in Phase 6 of this proceeding. Key findings of this initial evaluation are presented below.

- Cost Control: The Companies have not yet achieved effective cost control due to continuing reliance on fossil fuels for generation; the Companies have also increased spending on O&M during MRP1, which is likely to drive up customer rates in the future, though additional data is needed to

contextualize and better understand the increase in O&M spending and its implications for the effectiveness of PBR.

- Transition to Renewables: The Companies have demonstrated modest success in transitioning to renewables, and there are indications that the pace of this transition is increasing. Over time, this should help with cost control. The PBR mechanisms driving the Companies to shift away from reliance on fossil fuels are likely performing as designed.
- Reliability: The Companies' transmission and distribution reliability performance is not meeting regulatory standards, as indicated by recent penalties under the transmission and distribution ("T&D") reliability PIMs.[12] More data is required to evaluate whether the key drivers of insufficient performance.
- Safety: There is insufficient data to evaluate the Companies' safety performance in a systematic fashion, and metrics should be developed to track safety performance systematically, including through more completely capturing risks to the general public from the Companies' operations. However, the Maui wildfires and 2024 underground fires in Honolulu[13] suggest deficient safety performance. More data is required to evaluate whether the performance has been consistently or increasingly deficient; whether deficiencies in performance are the result of excessive cost-cutting; and whether any modifications to PBR mechanisms are indicated.

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12 See, for example, Transmittal No. 25-05, at 20, Table 6.

13 See Consumer Advocacy – Public Utilities (DCA) | HECO Power Outage – Chinatown 6/20.

II. METHODOLOGY FOR EVALUATING PERFORMANCE.

The Commission recognized the challenge of establishing a methodology for evaluating PBR in Order No. 40852, noting that "the methods and criteria for evaluating the PBR framework may be controversial."[14] The Commission further recognized "the limited examples from other jurisdictions and the unique characteristics of Hawaii's PBR framework,"[15] and suggested that the PBR Guiding Principles and Priority Goals and Outcomes established during Phase 1 of the PBR proceeding be used as evaluation tools.[16] However, the Consumer Advocate appreciates that the Commission has not required the parties to exclusively rely on these criteria. Rather, in the Phase 5 Briefing Order, the Commission explained that "[p]arties may rely on their own criteria or method of evaluation but must describe this with a reasonable amount of detail and specifically identify the data and information that supports their conclusions."[17]

In this brief, the Consumer Advocate has aimed to be as quantitative as possible in its evaluation of the Companies under PBR. Each of the following four sections focuses on one key outcome. First, the Companies' performance in this area is assessed. Then, implications for PBR mechanism design are considered.

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14 Order No. 40852, at 7.

15 Order No. 40852, at 7.

16 See generally D&O 36326.

17 Phase 5 Briefing Order, at 5.

III. DISCUSSION.

A. COST CONTROL.

1. Companies' Performance on Cost Control.

While the Commission identified many different objectives for PBR, cost control is a primary and fundamental goal. However, assessing utility efforts to control costs is difficult. The Companies' rates have long been among the highest of any U.S. utility, but the key question is not whether rates are still high (they are), but whether the Companies, under PBR, have managed to control costs – or, equivalently, if cost control would have been poorer had PBR not been implemented. Unfortunately, there is no alternative set of metrics where PBR has *not* been implemented for the Companies. Instead, it falls to the parties to use judgement to assess the extent to which the Companies have achieved cost control – with reference to benchmarks, including data from other jurisdictions to the extent possible.

In this section, the Consumer Advocate separately considers the change in costs passed through to customers in electricity rates (i.e., costs to customers) and the change in costs incurred by the Companies which are not passed through due to the effect of the ARA.

The Companies' rates were relatively steady in 2015-2020 but increased significantly in 2021-2024. Over the first three years of PBR (2021-2024), Hawaiian Electric's average rates have risen by about 42 percent, Maui Electric's average rates have risen by about 29 percent, and Hawaii Electric Light's average rates have risen by about 31 percent.[18] This increase was driven primarily by increased fossil fuel prices

[18] See attached report, "Hawaiian Electric Under PBR: 2021-2024", at 5.

affecting both the costs of central generation and the cost of purchased power from oil-burning facilities.[19] On the other hand, the cost of purchased power from renewable facilities has been relatively low and less volatile over this period.[20]

The extent of changes in actual operations and maintenance ("O&M") spending and capital expenditures ("CapEx") are occluded by the ARA formula, which mechanically increases base rates during every year of the MRP without reflecting actual costs incurred by the Companies.[21] Nonetheless, the Companies' success or failure in restraining O&M and CapEx will ultimately matter to its customers when rates are rebased. Over the first four years of MRP1, O&M costs have trended strongly upward.[22] Meanwhile, capital expenditures have been more restrained.[23] More context is needed to understand whether these trends in spending suggest reasonable efforts at cost control.

2. PBR and Cost Control.

The Companies have not demonstrated clear cost control during MRP1. As noted in the previous section, rates have been rising with the price of fossil fuels, and the Companies' O&M expenditures have also risen sharply despite the ARA incentive to control these costs. We next consider the implications of this performance picture for the evaluation of PBR.

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19 Ibid, at 9.

20 Ibid, at 16.

21 D&O 37507, at 35.

22 Hawaiian Electric Under PBR: 2021-2024, at. 10-11.

23 Ibid, at. 10-11.

Several mechanisms under PBR are designed to encourage cost control including the MRP and associated revenue formula, the ECRC, and the CSSM. Certain PIMs also encourage cost control through incentivizing a transition to renewables. As noted previously, it is not clear yet how to interpret the effects of the MRP/ARA on cost control. The Consumer Advocate awaits more evidence from the forthcoming rate case.

The ECRC aims to induce cost control and efficient operation of the Companies' fossil generation units by crediting or charging the Companies for a portion of savings/spending overages on fossil fuels for generation relative to target, thereby investing the Companies in the efficient operation of its generation units and competitive procurement of fossil fuels. The ECRC is defined with a target heat rate for the Companies' generation units that factors into the calculation of the target for fossil fuel expenditures and encourages efficient operation of the Companies' fleet.[24] While the ECRC does financially invest the Companies in what would otherwise be a wholly passed-through expense, its effects are relatively modest and likely not substantially influencing the Companies' operational or investment decision-making.

The CSSM aims to fill in a gap in the MRP/ARA incentives by encouraging cost control for non-ARA spending, including spending that is recovered through the ECRC, PPAC, and EPRM. In this respect, the CSSM complements the ECRC. The CSSM is an upside-only shared savings mechanisms that provides each of the Companies with the opportunity to retain 20 percent of any savings on the aggregate of ECRC, PPAC, and EPRM expenditures relative to a benchmark calculation that reflects the total of these

[24] The Consumer Advocate notes that the Companies filed an application on February 29, 2024 to modify the target heat rates and deadbands in the ECRC in Docket No. 2024-0057, which the Commission approved in Decision and Order No. 41442, filed on December 30, 2024.

expenditures for a base year adjusted for total sales.[25] In the first year of CSSM operation in 2023, none of the Companies claimed any earnings; in 2024, Hawaii Electric Light reported CSSM earnings of approximately $2.8 million.[26]

It is difficult to assess how well the CSSM is functioning, given that it has been in operation for only two years, that there is no known equivalent mechanism anywhere else in the U.S., and given that only one of the Companies, once, has earned rewards from this incentive. When the CSSM was first discussed in 2021, the Consumer Advocate raised concerns about whether the mechanism as designed could successfully overcome the incentives to increase earnings through the EPRM.[27] This concern still stands.

Finally, certain PIMs may indirectly encourage cost control through incentivizing behavior that supports spending restraint. A key example is the RPS-A PIM, which rewards the Companies for transitioning away from fossil generation to renewable supply. This PIM, and the other incentives to decarbonize the grid, appear to be functioning as designed. They are discussed further in the following section.

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25 For a discussion of the CSSM formula, see, the Commission's Decision and Order No. 38429, filed on June 17, 2022, at 50-57.

26 Hawaiian Electric Under PBR: 2021-2024, at 2.

27 For a discussion of the Consumer Advocate's prior concerns on the CSSM, especially as it relates to the EPRM, see, Consumer Advocate's Final Statement of Position on Staff Proposal for Development of Priority Performance Mechanisms, filed on April 8, 2022, at 2 and 13-21; and Consumer Advocate's Post-Hearing Reply Brief, filed on May 25, 2022, at 14-16.

B. TRANSITION TO RENEWABLES.

1. Companies' Performance in Transitioning to Renewables.

As noted above, the Companies have remained relatively dependent on fossil generation over the first four years of MRP1. Some factors outside the Companies' control may have somewhat affected the Companies' ability to successfully transition to renewables, including the closure of the AES coal-fired generation facility, which may have paradoxically induced the Companies to step up their own fossil-fueled generation in the short run, and global supply chain issues that hindered the Companies' ability to interconnect new renewable facilities and contract for new renewable supply. Notwithstanding these challenges, the Companies have stayed on track with the RPS. Further, there are indications from the last year in particular that suggest that the Companies are intensifying in their transition to renewables.

In 2024, the Companies claimed about $1.9 million on RPS-A, which was a significant increase relative to previous years.[28] Also in 2024, the share of total generation from PPA renewables reached about 18.4 percent, up from about 13.7 percent in 2020.[29] Between 2023 and 2024, the share of total system energy needs met by PPA battery storage increased from 0.1 percent to 1.8 percent.[30] (Battery storage only appears as system energy resources in 2023.) Meanwhile, total system generation from rooftop solar reached 16.1 percent in 2024, up from 13.5 percent in 2020.[31]

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28 Hawaiian Electric Under PBR: 2021-2024, at 16.

29 2024 Statistical Supplement. Hawaiian Electric Industries, Inc., at 19.

30 Ibid.

31 Ibid.

The Consumer Advocate is hopeful that continued earnest efforts to transition away from reliance on fossil generation will yield meaningful cost savings through reducing O&M expenditures and increasingly insulating customers from the effects of the volatile global fuel market.

2. PBR and Transition to Renewables.

There are several distinct incentives encouraging transition to renewables, and these incentives appear to be starting to bear fruit. The MRP/ARA, ECRC, CSSM, and RPS-A all encourage the transition to renewables – as a means to increase retained savings (MRP/ARA and CSSM), reduce risk (ECRC), and directly increase earnings (RPS-A). Given the importance of transitioning to renewables, both to control costs and meet carbon goals, the Consumer Advocate recommends that this set of mechanisms be reviewed in Phase 6 to see if they can provide better incentives.

C. RELIABILITY.

1. Companies' Performance in Reliability.

The Companies are obliged to deliver reliable service as part of their exclusive franchise. Unfortunately, over the term of MRP1, the Companies' T&D reliability performance has generally been worsening. Unlike cost control, where events beyond the Companies' control can have a large impact, the Companies have greater control over reliability performance, especially when performance is normalized for year-to-year weather-related variability.

There are four key indicators of each of the Companies' reliability performance, with associated financial incentives in the form of potential penalties: SAIDI and SAIFI for

the transmission and distribution system (T&D SAIDI and SAIFI), and SAIDI and SAIFI associated with generation units (Generation SAIDI and SAIFI). If the Companies are regularly incurring penalties, it is reasonable to conclude that reliability performance is sub-standard.

Over the term of MRP1, T&D SAIDI and SAIFI have been trending worse for each of the Companies. Meanwhile, Generation SAIDI and SAIFI have been fairly stable. Since 2021, each of the Companies has incurred a penalty for SAIDI twice (Hawaiian Electric in 2023 and 2024; Maui Electric in 2021 and 2023; Hawaii Electric Light in 2022 and 2023), while only Hawaii Electric Light has been penalized for SAIFI, once, in 2023. With the deadband set at one standard deviation and auto-correlated performance targets that worsen with worsening performance, the Companies' incurrence of SAIDI penalties is worse than would be expected if performance were stable or improving.

Generation SAIDI and SAIFI PIMs have only been in effect for two years. In this time, a penalty has only been assessed once – on Hawaii Electric Light in 2024.

2. PBR and Reliability.

The fact that the Companies have demonstrated worsening reliability performance over the term of MRP1 and incurred penalties on the reliability PIMs does not necessarily indicate that PBR itself is to be faulted for the Companies' poor reliability performance. Nor are these outcomes necessarily suggestive of the need to modify PBR mechanisms in the interest of improving reliability. However, it is reasonable to question whether the incentives to cut spending inherent in the MRP could have resulted in too much cost cutting to the detriment of reliability (and possible adversely affecting safety, too). The Consumer Advocate awaits more information on the Companies' O&M and capital

expenditure decision-making under MRP1, as should be made available through the rate case, to assess what effects PBR incentives may have had on necessary and prudent reliability spending. Should it be determined that the Companies have excessively reduced needed reliability investment, then certain modifications to the PBR mechanisms may be warranted. These modifications could take the form of both "sticks and carrots" – i.e., increasing the penalties for deficient reliability performance while also encouraging prudent investments to improve reliability.

D. SAFETY.

1. Companies' Performance in Safety.

While safety is a key performance domain for the Companies, there is little comprehensive data available on the Companies' safety performance. Notwithstanding the Maui wildfires and underground fires in Honolulu in 2024[32] that are suggestive of deficiencies in safety performance, there is a lack of data with which to evaluate safety. The Companies collect only three metrics addressing safety – but none of these fully reflect the risks to the general public from the Companies' operations. These metrics do not indicate any degradation in performance since the implementation of PBR in 2021. The Consumer Advocate recommends that the Commission, with input from the parties, seeks to establish a more complete understanding of safety as a performance domain and establish a comprehensive set of metrics to track safety performance.

[32] See Consumer Advocacy – Public Utilities (DCA) | HECO Power Outage – Chinatown 6/20.

2. PBR and Safety.

There is insufficient data available to assess what effect, if any, the implementation of PBR has had on the Companies' safety performance. The Consumer Advocate is concerned that reductions in spending under PBR might have precipitated worsening safety performance, but no such conclusions may be drawn until the detailed review of the Companies' spending that will occur during the rate case.

E. FURTHER COMMENTS ON PIMS.

PIMs are a key component of the PBR framework that may promote the achievement of specific objectives beyond cost control. The Consumer Advocate wishes to acknowledge that the current portfolio of PIMs is ambitious and aspirational –targeting many important outcomes– but also that there may be ways to improve the effectiveness of the PIMs.

First, it is worth noting that the Companies have been relatively unaffected financially by the PIMs over MRP1. This is true both because the Companies have not earned penalties/rewards on most PIMs in most years, and also because the total earnings at stake for these PIMs remains modest. It may be worth increasing the incentives/penalty values of the PIMs in aggregate, in coordination with appropriate modifications to the allowed ROE in the rate case, in order to further induce the Companies to prioritize the incentivized outcomes. This should be done in parallel with considering whether certain other PIMs are even necessary and could be done away with.

Further, as the Consumer Advocate has recommended previously, the Commission should establish a more robust procedure for systematically evaluating the

Companies' performance on PIMs, and the performance of the PIMs themselves, on an annual basis. Such a periodic review of PIMs would help to ensure that the PIMs portfolio is optimized and that one-off additions and subtractions from this portfolio do not miss the figurative forest for the trees.

Finally, there are certain outcomes that might warrant development of new PIMs. These outcomes include resiliency, equity, and safety. Further consideration to developing PIMs for these outcomes should be given during Phase 6.

F. RECOMMENDATIONS FOR PHASE 6 OF THE COMPREHENSIVE REVIEW.

The Commission has indicated that Phase 5 will narrow the scope of focus to priority PBR mechanisms, and that Phase 6 "will involve a more formal process to examine what specific modifications to selected PBR mechanisms should be considered."[33] However, at this juncture, it remains unclear how the Commission will determine which mechanisms to focus on in the next phase of this proceeding and it is not known how the Commission will mediate between the different parties' recommendations for changes to the various mechanisms.

Given the challenges involved in evaluating the performance of Hawaiian Electric under PBR and the related difficulties in assessing how well the PBR mechanisms have functioned, the Consumer Advocate cautions against premature exclusion of certain mechanisms from consideration during the next phase. Nonetheless, there is a clear need for prioritization. The Consumer Advocate thus recommends that the Commission put

[33] Order No. 40852, at 4-5.

forward an evaluation framework, that considers the input of the parties through these briefings, and that it provide additional details about the next phase of this proceeding, including detail about how mechanisms will be selected for further review and potential modification, and also addressing any prioritization of outcomes of mechanisms.

In the next phase of the comprehensive review, careful coordination with the rate case will be critical. The comprehensive review and rate case may each inform the other. Within the context of the rate case, it is necessary to bring to bear an understanding of the performance goals underpinning PBR and the Companies' performance in the relevant domains. Performance targets may inform discussions about budget needs. Meanwhile, data and insights that are yielded through the process of opening the Companies' books in the rate case may help to assess the Companies' performance in key domains and the function of the PBR mechanisms within the comprehensive review. Further, decisions about revenues in the rate case and about revenue mechanisms in the comprehensive review should be coordinated to ensure that the Companies are not over-compensated and to provide for the right set of incentives to support the objectives of PBR.

IV. CONCLUSION.

In this Opening Brief, the Consumer Advocate has offered preliminary findings on the Companies' performance in key domains and implications for associated PBR mechanisms. Hawaiian Electric's performance in cost control, transitioning to renewables, reliability, and safety has been mixed, with some concerning red flags. There is a need for further detailed review in Phase 6, which should be informed by the

enhanced access to data and learnings about the Companies' operations that should come out of the rate case. The Consumer Advocate strongly recommends that the Commission establish a formal framework for the next phase of the comprehensive review, to ensure that the interface between this review and the rate case is rational, coherent, and systematic.

While the Consumer Advocate expects that the Companies will continue to pursue the transition to renewables, which should ultimately result in enhanced cost control, there is cause for concern about both the increase in O&M spending during MRP1 and deficient reliability and safety performance which may concomitantly suggest inadequate spending on key outcomes. Depending on what is learned through the rate case and the continuing evaluation of mechanisms in the next phase of the comprehensive review, the Commission is requested to consider the following modifications to PBR:

- Changing the design of the CSSM to better incentivize cost control;
- Modifying PIMs and other mechanisms to further incentivize adequate reliability performance and to ensure that the Companies are compelled to sufficiently invest in reliability, including:
  - Consideration of whether certain PIMs could be done away with;
  - Introducing new PIMs to target other outcomes such as resiliency and equity; and
  - Introducing new metrics to track safety performance and considering PIMs to ensure that the Companies prioritize safety.

The Consumer Advocate wishes to thank the Commission for the opportunity to provide this analysis and the Commission's consideration of the comments, concerns, and recommendations expressed herein.

DATED: Honolulu, Hawaii, May 5, 2025.

Respectfully submitted,

By /s/ Michael S. Angelo
MICHAEL S. ANGELO
Executive Director

DIVISION OF CONSUMER ADVOCACY

Hawaiian Electric Companies under PBR: 2021-2024

Evaluation of Performance in Cost Control, Reliability, Safety, and Transitioning to Renewables

Prepared for the Division of Consumer Advocacy

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AUTHORS

Sophie Schadler
Chelsea Mattioda
Ben Havumaki
Tim Woolf

Synapse Energy Economics, Inc.

485 Massachusetts Avenue, Suite 3
Cambridge, Massachusetts 02139

617.661.3248 | www.we-energy.com

CONTENTS

1. INTRODUCTION

1.1. Purpose and Approach

The purpose of this report is to provide an initial evaluation of Hawaiian Electric's (the Companies) performance within certain outcome areas under the performance-based regulation framework (PBR Framework) that the Consumer Advocate views as high priority which include: safety, reliability, cost control and affordability, and progress in transitioning to renewable generation. Moving forward, cost control and affordability are expected to be substantially influenced by the Companies' success in moving away from their reliance on expensive oil-burning units and embracing renewable supply.[1]

For most outcomes, we examined the Companies' performance over the period 2015-2024 to capture results from before the implementation of PBR (2015-2020) and after (2021-2024). The data that was evaluated came from several sources including the Key Performance Metrics dashboard on the Companies' website, the Companies' annual reports, and the performance-incentive mechanism (PIM) data included in the Companies' spring filings.

1.2. PBR Mechanisms and Performance

The PBR Framework encompasses numerous mechanisms. For simplicity, these mechanisms may be grouped into four categories: annual revenue adjustment (ARA) formula mechanisms; performance-incentive mechanisms (PIMs); other revenue mechanisms; other mechanisms. While the functions of these mechanisms are diverse, certain generalizations may be made. The principal goal of the multi-year rate plan (MRP) and ARA formula mechanisms is to encourage cost control, while the main objective of the PIMs is to promote other performance outcomes. Meanwhile, the other revenue mechanisms may jointly encourage cost control and the achievement of other objectives – e.g., the Combined Shared Savings Mechanism (CSSM) incentivizes the reduction in spending on fossil fuels, which may be achieved through substituting renewables for fossil generation (transitioning to renewables).

1.3. Summary of Findings

Cost Control and Transition to Renewables

The Companies appear to have not yet achieved meaningful cost control under PBR. A key driver of the upward pressure on rates over the initial PBR period (MRP1) is the State's continuing dependance on fossil fuels.

[2] HELCO-WP-E-series PIM SSM, tab "WP-E8-001-CSSM"

The Companies' rates were relatively steady in 2015-2020 but increased significantly in 2021-2024 because of increasing fossil fuel prices affecting both the Companies' generation costs and the cost of some purchased power. The price of purchased power from renewable generation was relatively low and less volatile over MRP1.

Transitioning away from fossil-fired generation to renewable generation would clearly help reduce costs and price volatility. There are several mechanisms that encourage the Companies to increase their renewable generation, but they appear to have had only a modest effect in this direction:

- The Companies have consistently ended up short of their forecasts for RPS-A earnings.
- The Companies have alternatively been penalized and rewarded under the ECRC risk sharing mechanism. This appears to be primarily due to fluctuations in fossil fuel prices rather than the reduction in generation efficiency at the Companies' own units.
- In 2023, the first year of the CSSM, the Companies earned no CSSM incentive. In 2024, Hawaii Electric Light earned $2.8 million from the CSSM, which appears to be a result of savings on IPP energy costs in the performance year relative to the base year.[2]
- While the Companies could benefit under the ARA from reduced O&M spending on fossil units, their O&M spending has increased in recent years.

The EPRM and MPIR revenues increased significantly since 2017. However, these are a very small portion of the total revenue requirements of each company.

The Companies have reported consolidated ratemaking return on equity (ROE) in recent years that is significantly lower than the authorized ROE of 9.5 percent, and they project this difference will increase in future years without some sort of revenue rebasing. The Companies state that this erosion in earnings is not due to a lack of cost control per se; instead, they attribute it to several factors not anticipated when rates were last set, including wildfire mitigation and resiliency expenditures, increases in other O&M spending categories, and higher costs for aging infrastructure.[3]

Reliability

The Companies' T&D reliability performance in 2021-2024 was slightly worse than in 2015-2020. The Companies' Generation reliability performance was generally constant during this period. It is important to further evaluate the underlying causes of the declining T&D reliability performance.

Safety

The Companies collect only three metrics addressing safety, but these metrics are limited in scope and do not cover risks to the general public from the Companies' operations. These metrics do not indicate

[2] HELCO-WP-E-series PIM SSM, tab "WP-E8-001-CSSM"

[3] See Hawaiian Electric Brief on rebasing in Docket No. 2018-0088 at 8-9.

any degradation in performance since the implementation of PBR in 2021, but there are indications of deficient safety performance, including the 2023 Maui wildfires[4] and the 2024 underground fires in Honolulu.[5] More investigation will be required to determine the cause of any deficient safety performance.

2. COST CONTROL PERFORMANCE

2.1. Overview

The objective of cost control is primarily driven by the MRP. The MRP encourages the Companies to achieve efficiencies to constrain and/or reduce expenditures by fixing the increase in allowed revenues for capital costs and O&M expenses through the ARA formula to an external index during the term of the MRP and prohibiting the Companies from filing for a rate increase during this term.[6]

To evaluate cost control, we examined changes in three measures over recent years: total rates; total spending on rate base and on O&M (funded by the ARA); and total spending on non-ARA components, including fuel (ECRC), purchased power (PPAC), and "exceptional" projects (EPRM/MPIR). We also examined the Companies' success in transitioning to renewables, which should help to constrain costs over the long haul.

2.2. Commission's Long-Term Vision for Cost Control Under PBR

Through the early phases of this proceeding and in key Orders, including D&O 37507, the Commission articulated that PBR could encourage the Companies to cost effectively pursue the state's climate goals. Commission Staff provided a vision for how this framework would support cost control and the transition to renewables in their presentation on the CSSM on October 12, 2021.[7] A key diagram from this presentation is shown below as Figure 1.

This figure can be seen as presenting a stylized roadmap that shows how transitioning to renewables can result in cost savings. In turn, this vision for PBR should be considered in evaluating how well the Companies are performing under PBR, and how the PBR framework is functioning to support the targeted performance goals.

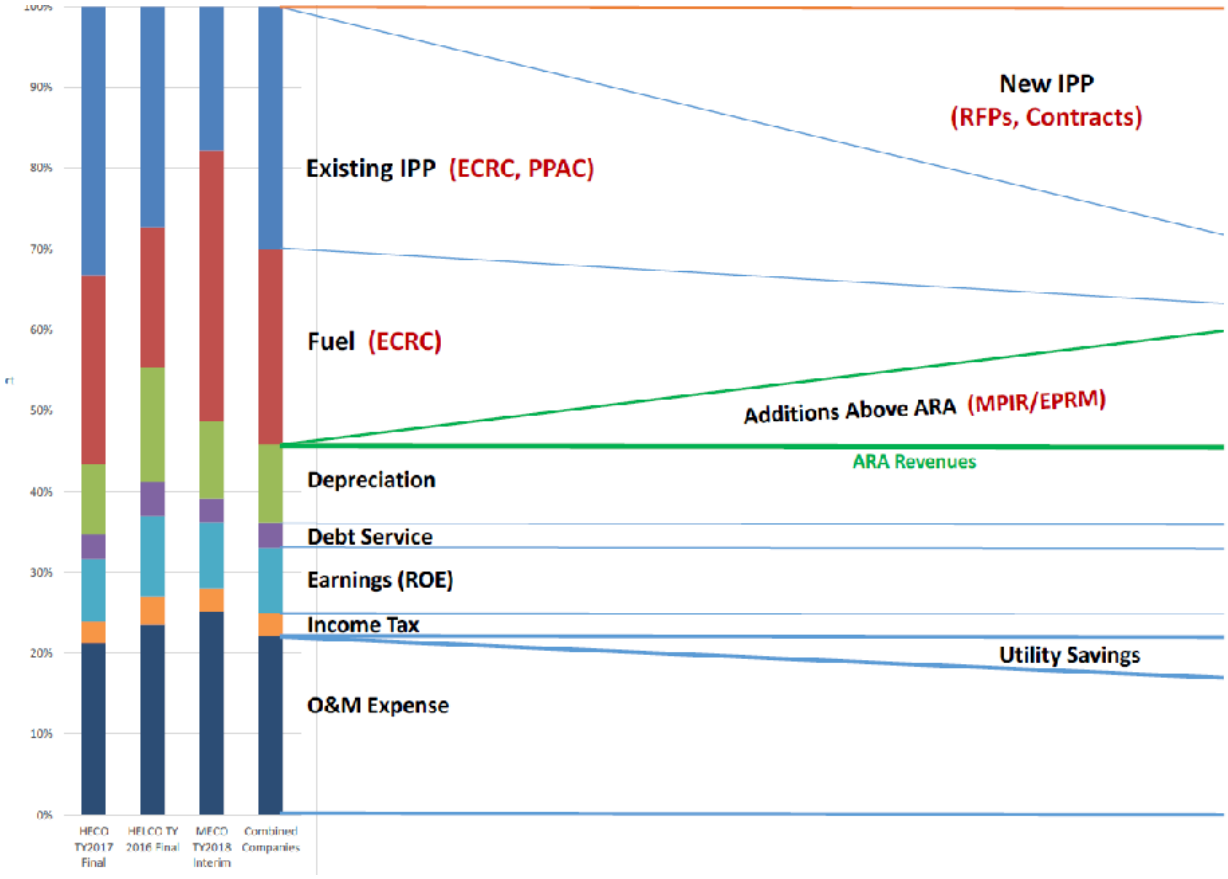
[4] See PUC Wildfire Investigation, Case No. 2024-01872.

[5] See Consumer Advocacy – Public Utilities (DCA) | HECO Power Outage – Chinatown 6/20.

[6] There is a lack of targeted affordability PIMs and metrics. There are a few LMI-related metrics, but these do not sufficiently get at the full picture of affordability concerns. It may be worthwhile to explore the potential for Hawaiian Electric to track customers' energy burden or other more representative metrics.

[7] The setting in which this figure was presented, in the context of the development of the CSSM, highlights a challenge to achieving PBR objectives: the Companies have little structural incentive to control non-ARA costs (fuel, purchased power, and EPRM, which are together covered by the CSSM).

Figure 1. Changes in Spending Under PBR: ARA- and Non-ARA-Funded Components



Source: HI PUC Staff Presentation (October 12, 2021)

In Figure 1, the Companies' actual revenue requirements are shown on the left. ARA-funded expenditures are shown below the green line, while non-ARA funded expenditures are above the green line. Two main categories of savings are identified: savings on O&M (funded through ARA) and savings on fuel (not funded through ARA). Under the PBR Framework, the Companies are incentivized to reduce ARA-funded O&M expenditures since they would then retain any resulting savings – at least in the near term before rates are rebased. The larger savings, per this figure, are anticipated to come through reduction in total expenditures on fossil fuels as the Companies are expected to shift away from reliance on fossil fueled generation units – presumably through construction of new renewable facilities owned by the Companies and through increasing the share of renewable PPAs in the overall generation mix.[8]

[8] It is worth noting that Figure 1 was likely not meant to be to scale. While the aggregate effects of savings and spending increases appear to be offsetting (the total revenue requirement doesn't change over time), this may not necessarily occur. It is also worth noting that the Companies' financial position would be expected to be improving over time if the vision reflected in Figure 1 according to its scale, were realized – the Companies in this scenario retain savings on ARA-funded O&M and also presumably increase earnings through significant expenditures on EPRM.

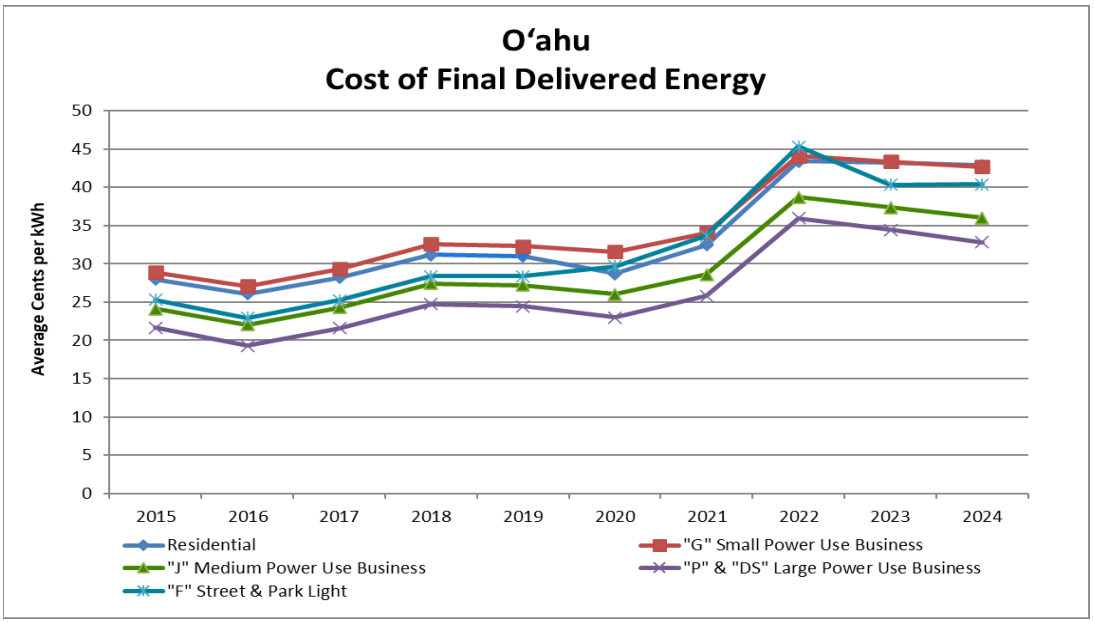
While this diagram does not depict IPP costs and ARA-funded capital costs commensurately increasing to offset the fuel saving, this figure does show a marked increase in EPRM expenditures. The function of these EPRM expenditures is not clear in the figure, but presumably, the envisioned EPRM spending would cover, among other things, investments necessary to support grid decarbonization.

2.3. Change in Total Rates

All three of the Companies experienced rate increases since implementing PBR, as shown by the Cost of Final Delivered Energy metric reported on the Companies' dashboard. When comparing pre-PBR (2015-2020) and post-PBR (2021-2024) average rates, the Companies' rates have risen 42 percent (Figure 2), Maui Electric's rates have risen 29 percent (Figure 3), and Hawaii Electric Light's rates have risen 31 percent (

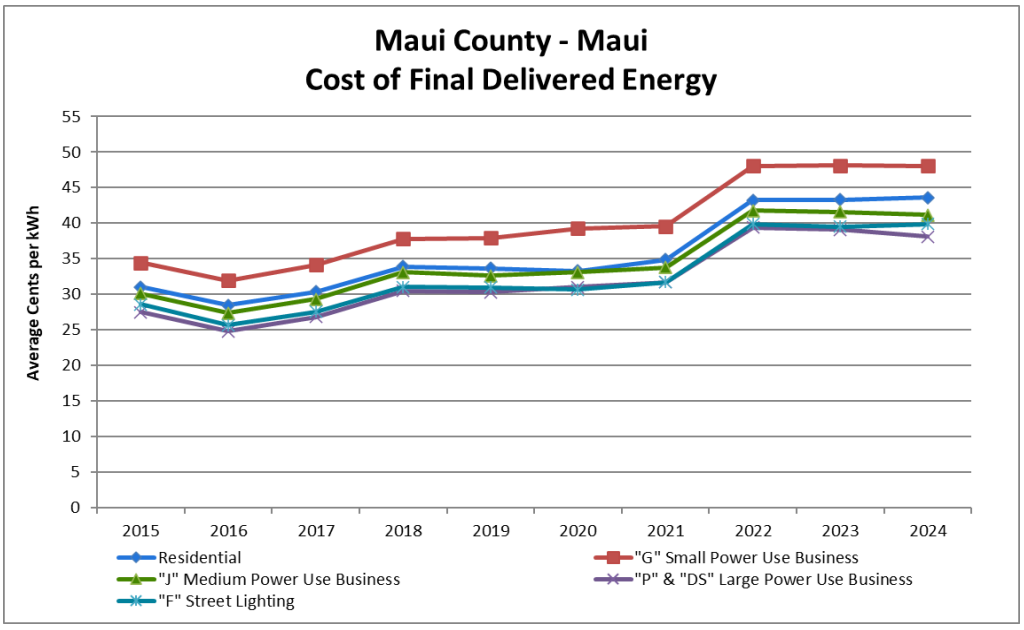
Figure 4).

Figure 2. O'ahu Cost of Final Delivered Energy (2015-2024)



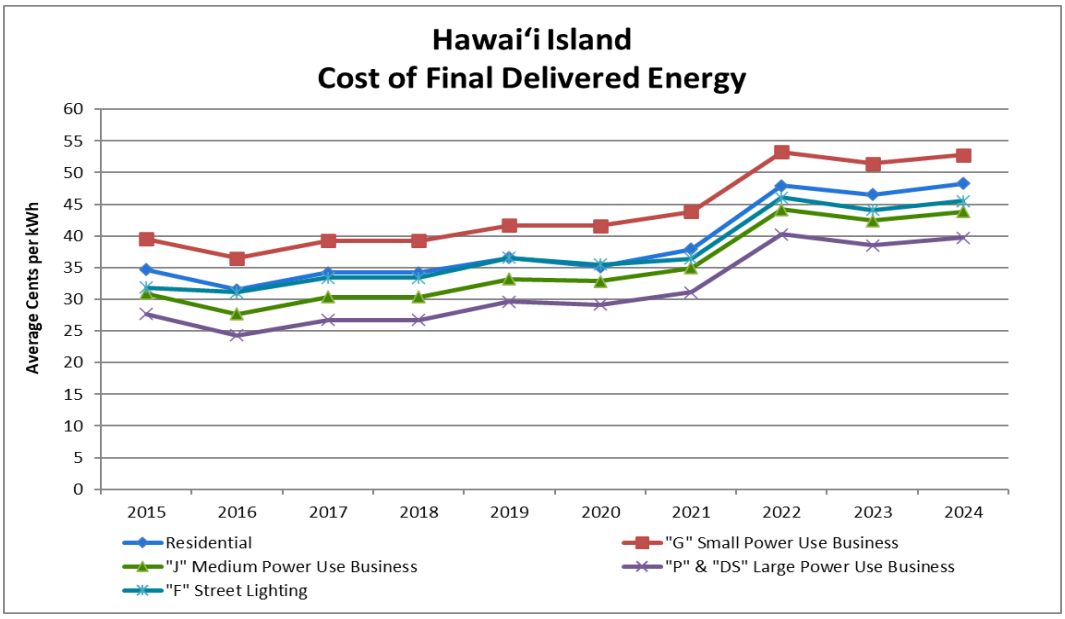
Source: Hawaiian Electric Dashboard

Figure 3. Maui Cost of Final Delivered Energy (2015-2024)



Source: Hawaiian Electric Dashboard

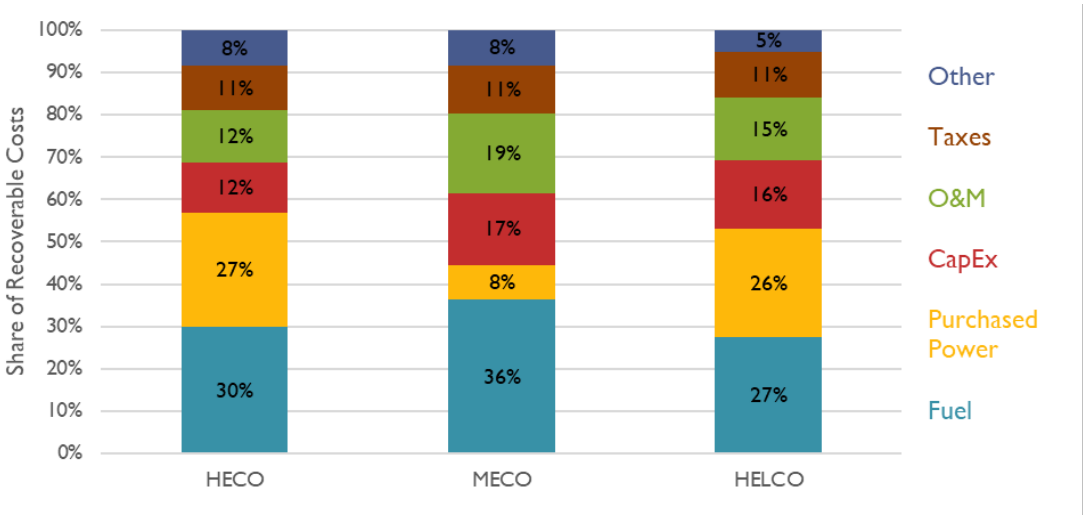
Figure 4. Hawai'i Island Cost of Final Delivered Energy (2015-2024)



Source: Hawaiian Electric Dashboard

The Contributing Cost Components to Customer Rates metric shows the breakdown of overall rates by cost components. As of Q4 2024, the latest quarter for which data has been published, fuel costs comprised the largest share of recovered costs for all three Companies. The next largest share of costs comes from purchased power for Hawaiian Electric and Hawaii Electric Light, and from O&M costs for Maui Electric (which relies less heavily on purchased power). Figure 5 shows the magnitude of each cost component relative to total recoverable costs for each Company; the CapEx category includes return and depreciation, and the Other category includes RBA, PBF, and 'other' costs as defined by the scorecard dashboard.[9]

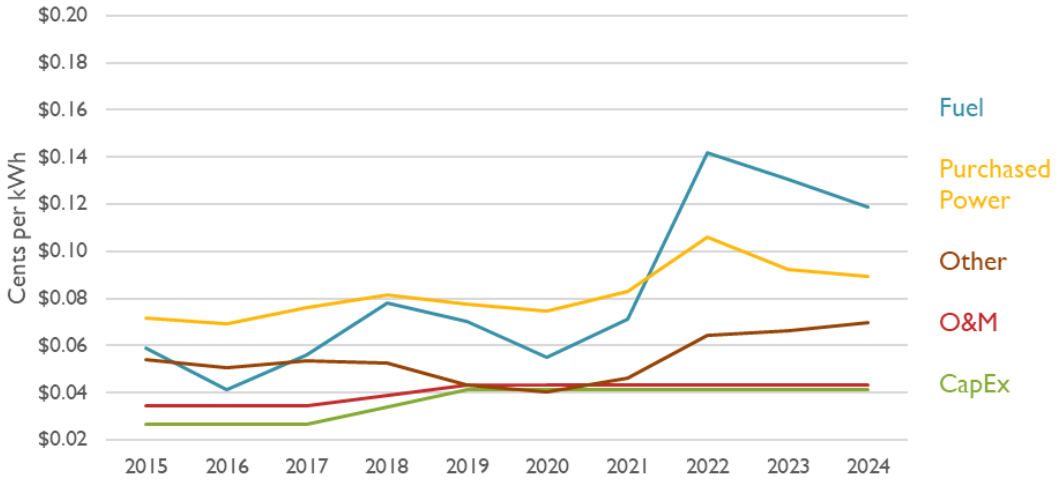
Figure 5. Cost components share of total recovered costs as of Q4 2024



The change in the composition of rates for each of the Companies is shown below in Figure 6, Figure 7, and Figure 8; in these figures, the CapEx category includes return and depreciation and the Other category includes RBA, PBF, taxes, and other.

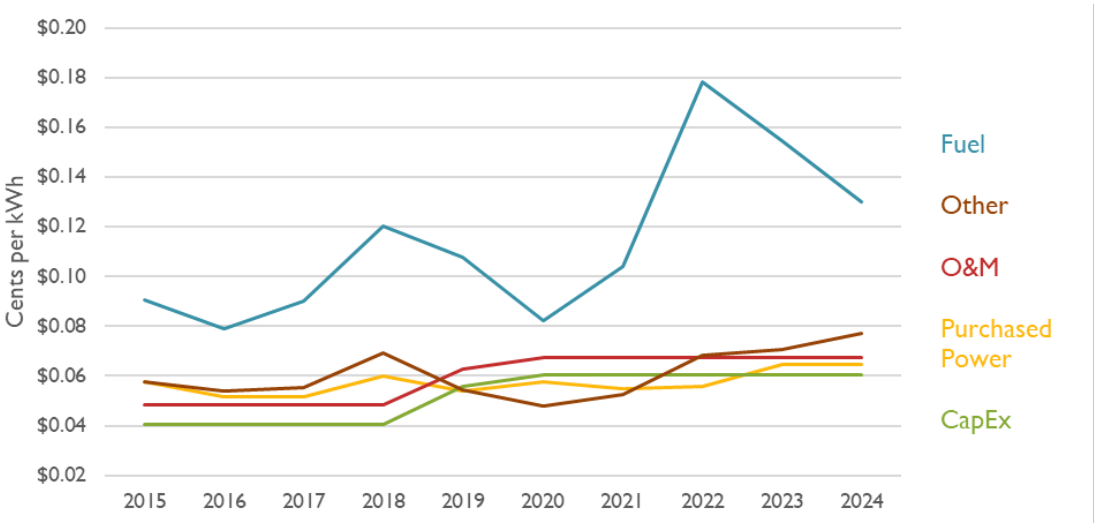
[9] The Hawaiian Electric Performance Scorecards and Metrics dashboard defines 'other' as "all other surcharge items, including Interim Rate Increases, Renewable Energy Infrastructure Cost Recovery Provision, and IRP Cost Recovery charges." Accessed April 29, 2025, available at: https://www.hawaiianelectric.com/about-us/performance-scorecards-and-metrics/rates-and-revenues.

Figure 6. Components of Retail Rate for Hawaiian Electric (2015-2024)



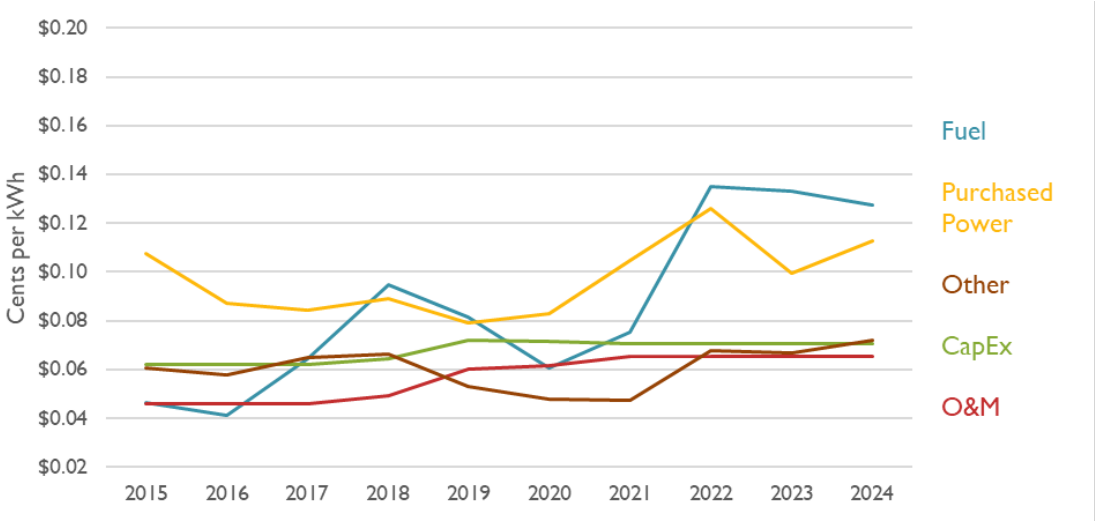
Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

Figure 7. Components of Retail Rate for Maui Electric (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

Figure 8. Components of Retail Rate for Hawaii Electric Light (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

For each of the three companies, the largest driver of the increases in overall average rates since the inception over PBR in Hawaii (i.e., over the period 2021-2024) is the growth in fuel costs. For Hawaiian Electric, the increase in fuel costs explains about 60 percent of the total average rate increase; for Maui Electric, fuel cost changes explain about 57 percent of the total average rate increase; for Hawaii Electric Light, fuel cost changes account for about 54 percent of the total average rate increase.

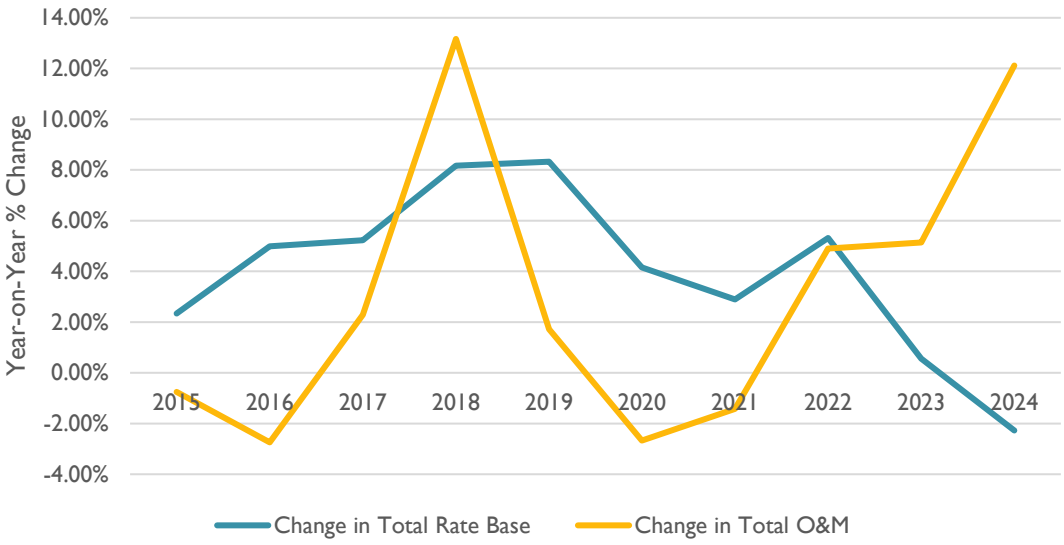
2.4. Changes in ARA-Funded Expenditures

There is a key distinction between what the Companies spend and what they recover, with the gap between these two categories potentially even more pronounced under the MRP. Since the Companies are not able to reconcile their allowed revenues (determined by the ARA) to *actual* O&M and capital expenditures during the term of the MRP, they have an incentive to control these costs. The degree to which they succeed in constraining this spending may be an indicator of PBR's success in inducing financial discipline and more efficient operational practices.

There are two metrics covering ARA-funded activity: the Rate Base per Customer metric and the Operations and Maintenance (O&M) Cost per Customer metric. We used the data for these metrics to calculate annual rates of growth for rate base and O&M, which are presented in Figure 9, Figure 10, and Figure 11.[10]

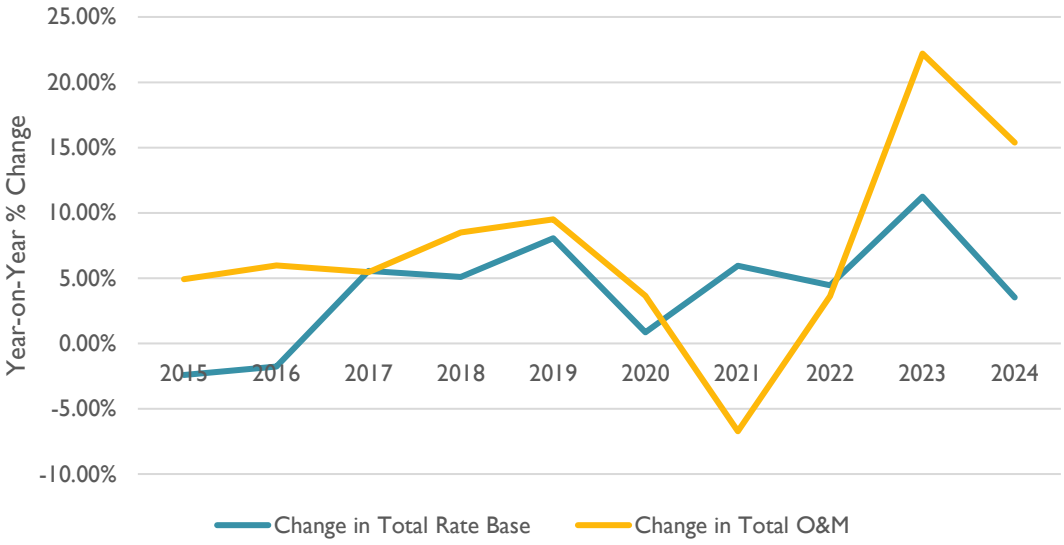
[10] The Companies' metrics for rate base and O&M activity incorporate normalization for customer growth. We determined to use these data to calculate non-normalized rates of growth. While recognizing that customer growth does drive up capital and O&M costs, the connection between customer growth and expenditures on O&M and capital is tenuous. Moreover, there is a

Figure 9. Year-on-Year Change in Rate Base and O&M for Hawaiian Electric (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

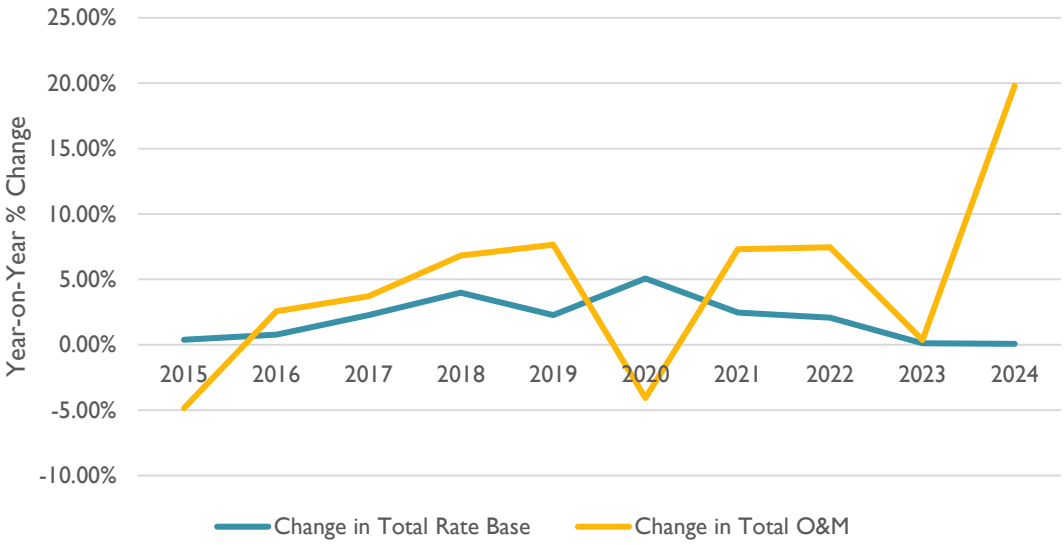
Figure 10. Year-on-Year Change in Rate Base and O&M for Maui Electric (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

probable lag in the response of these indicators to customer growth, and some investment in system capacity may be undertaken in anticipation of customer growth rather than in response to it.

Figure 11. Year-on-Year Change in Rate Base and O&M for Hawaii Electric Light (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

While the rate of change in O&M spending across the board has been quite variable over time, increasing under PBR for all Companies, Hawaiian Electric's and Hawaii Electric Light's rate base have exhibited a stable or falling rate of increase in recent years, while Maui Electric's has been more variable. It is too early to draw any definitive conclusions about the effects of PBR on these spending categories or the effects of these changes in spending on any other performance domains.

The Companies' Spending and Earnings: Evidence from Workshops and Briefs

The discussion about the Companies' recent and forecasted earnings in workshops and through party briefs may cast additional light on spending trends. At the PBR Working Group meeting on August 30, 2024, the Companies presented annual earnings for past and future years (projected). In this presentation, the Companies reported consolidated ratemaking ROE of 8.4 percent for 2023, as compared with an authorized ROE of 9.5 percent; the Companies projected that earnings would fall to 4.7 percent by 2026.[11] Among other things, the Companies attributed this erosion in earnings to greater than anticipated wildfire mitigation and resiliency expenditures along with increases in other O&M spending categories and higher costs for aging infrastructure. The Companies emphasized the impacts of

[11] The problem of under-earning is also addressed in certain quarterly earnings presentations. For example, in the Companies' Q1 earnings presentation for 2024, they assigns responsibility for the shortfall in actual Q1 ROE relative to allowed ROE (7.8 percent vs. 9.5 percent) as follows: -0.2 percentage points is due to non-recoverable items; -1.2 percentage points is due to actual O&M, depreciation, and return on rate base over recovery; -0.3 percentage points is due to worse fuel efficiency. In addition, an incremental +0.2 percentage points is due to "Others, Net." See HEI 1Q24 Financial Results Presentation. May 10, 2024.

inflation, risk repricing (due to wildfires and the Companies' resulting financial position), and new priorities in driving up business costs.[12]

In the Companies' brief on rebasing, they remarked that "many new Hawaiian Electric and State initiatives and priorities were not factored in setting base rates."[13] The Companies further indicated that in order to cover incremental capital expenditures and expenses associated with wildfire risk mitigation, "the Companies had to reprioritize millions of dollars of other expenses or capital investment and divert the funds to these projects." As in their earlier presentation, the Companies specifically pointed to rising insurance premiums as a driver of revenue insufficiency, and the Companies also implicated COVID-19 supply chain disruptions in raising overall business costs.[14]

2.5. Change in Non-ARA-Funded Expenditures

The Companies pass through fuel costs (ECRC) and purchased power costs (PPAC). In addition, the Companies' non-ARA revenue requirement includes exceptional project expenditures, which are recovered through the EPRM/MPIR. Scrutinizing trends in non-ARA costs under the MRP is important because (a) these costs make up a major portion of rates, (b) these costs are the major driver of rate volatility, and (c) the Companies are relatively less incentivized to control these costs because they are passed through to customers.

There are three metrics that address trends in fuel and purchased power costs: the Cost Control for Non-Annual Revenue Adjustment (ARA) Components Scorecard, the Recovery of Fuel and Purchased Energy Costs metric, and the Contributing Cost Components to Customer Rates metric discussed above. While these three metrics all capture the rising fuel costs that have driven the Companies' overall rate increases in recent years, they provide discrepant values that are difficult to reconcile. Nonetheless, as discussed above in Section 2.3, it is clear that fuel costs have risen precipitously over our review period – the main driver of rate increases in recent years.

The Cost Control for Non-Annual Revenue Adjustment (ARA) Components Scorecard also provides total MPIR/EPRM recovery by year.[15] The total value of MPIR/EPRM recovery for Hawaiian Electric was relatively stable between 2019 and 2021; Maui Electric and Hawaii Electric Light did not begin to use these mechanisms until 2020. Since 2021, cost recovery through the MPIR and EPRM mechanisms has increased for all three Companies, most notably for Hawaiian Electric. This increase appears to be attributable to the expansion of the grid modernization Phase 1 project.[16] Figure 12 shows the three Companies' revenues from the MPIR and EPRM mechanisms over time.

[12] Hawaiian Electric Presentation to PBR Working Group on August 30, 2024.

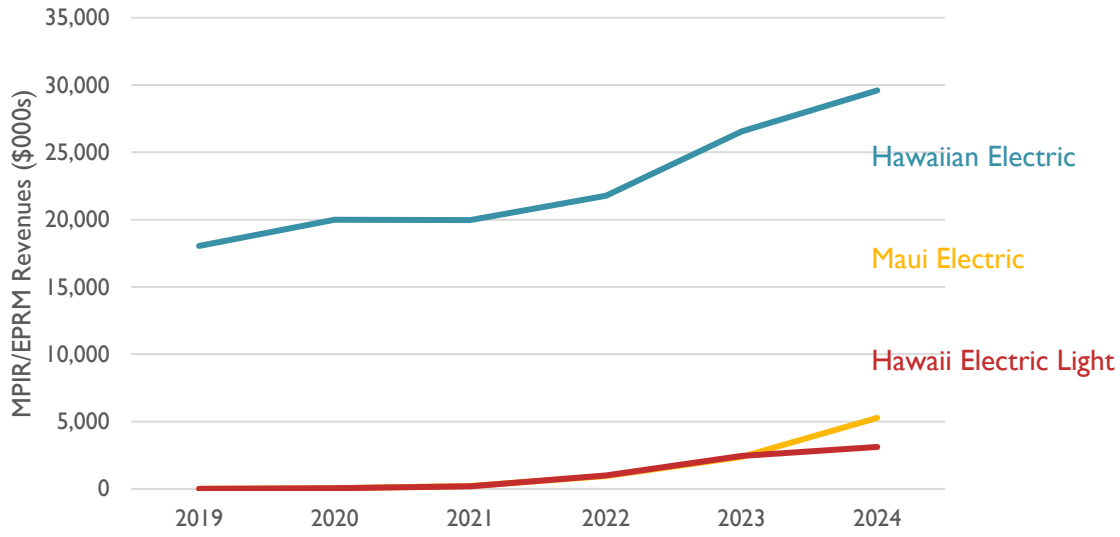
[13] Hawaiian Electric Brief on rebasing in Docket No. 2018-0088 at 2.

[14] Hawaiian Electric Brief on rebasing in Docket No. 2018-0088 at 8-9.

[15] The EPRM is the successor to the MPIR that was instituted with the PBR framework.

[16] 2023 Spring Report at 4 and 2023 Spring Report at 20.

Figure 12. MPIR and EPRM Revenues (2015-2024)



Source: Synapse Energy Economics, based upon data from Hawaiian Electric Dashboard

2.6. Cost Control through Transitioning to Renewables

Both the rate impacts of rising fuel costs and the rise in O&M expenses could be mitigated through transitioning to renewables. With increasing reliance on renewables, the Companies will be better insulated from the effects of fuel prices. Further, substituting renewable generation for Company-owned central generation units should help to constrain or even bring down O&M spending over time.

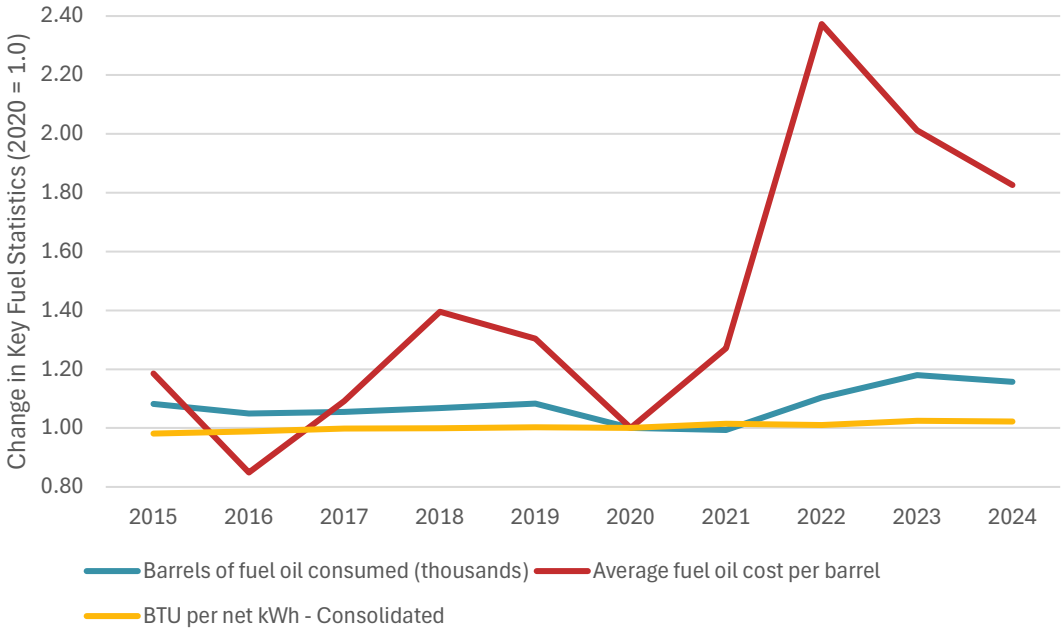
To evaluate the Companies' success in reducing reliance (and spending) on fossil generation, we mainly relied on the information contained in the Companies' annually filed statistical supplements. Certain relevant information is also available on the metrics dashboard (Independent Power Producer ("IPP") Generation metric). Detailed information on costs by generation type and source is provided in the monthly ECRC filings.

Spending on Fossil Fuels has Increased and Remained High

As noted earlier in Section 2.3, overall spending on fuel for generation has increased markedly in recent years. While the Companies have succeeded in reducing total generation from fossil units – mainly as a result of procuring more renewable generation through IPPs– this effect has been more than offset by the increasing price of fuel, which averaged about 83 percent higher in 2024 compared with the price in 2020.

To date, the Companies have not reduced the share of total generation from Companies-owned fossil units.[17] More than anything else, this persistent reliance on fossil fuel powered central generation has kept electric rates high. Figure 13 shows the change in total annual generation from the Companies' fossil units, total barrels of fossil fuel (fuel oil) consumed annually for generation, and the annual average price per barrel of fuel oil for each year over the period 2015–2024, relative to the base year of 2020 (2020 = 1.0). The data in this figure may be used to tease out trends in total fuel usage, generation efficiency, and fuel prices.

Figure 13. Annual Fuel Oil Generation, Fuel Oil Consumption for Generation, and Fuel Oil Price



Source: Synapse Energy Economics, based upon data from the Companies' Annual Statistical Supplement and Dashboard

It is apparent that the main driver of increased expenditure on fossil fuels for generation in the Companies' units is the increase in the *price* of these fuels. While price was about 83 percent higher in 2024 than in 2020, total consumption of fuel was about 16 percent higher in 2024, the heat rate was about 2 percent higher (indicating somewhat worsening efficiency in generation – the target heat rate for LSFO units owned by the Companies has remained fixed at 0.011142 MMBtu/kWh since the adoption of the fossil fuel risk sharing provision of the ECRC in 2019; diesel units are not subject to a heat rate target).[18]

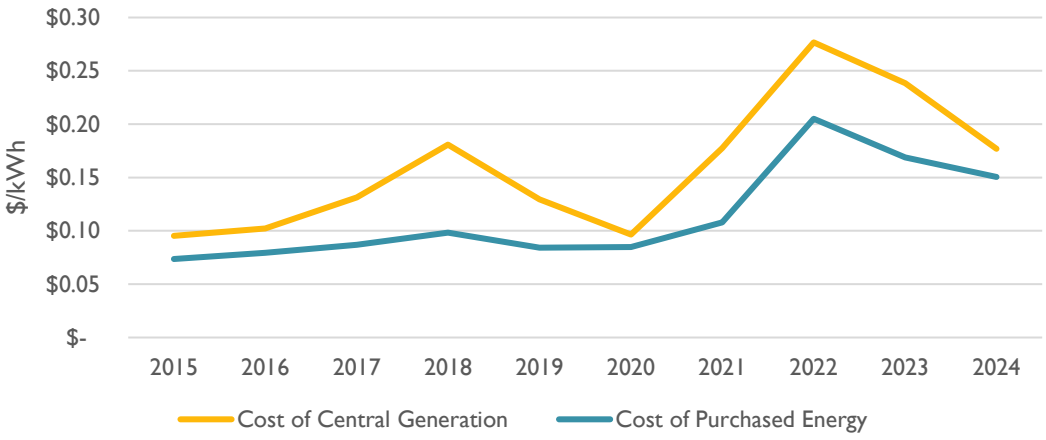
[17] See Hawaiian Electric 2019 Statistical Supplements at 19. Available at: https://www.hei.com/investor-relations/reports-and-filings/default.aspx,

[18] As noted in footnote 11, the Companies estimate that worsening fuel efficiency has resulted in a 0.3 percentage point reduction in earnings in FY2024.

2.7. Central Generation vs. PPA Generation for Hawaiian Electric: Costs and Renewables

We reviewed the Companies' ECRC filings for the period 2015–2024, specifically examining the data in each year's December filing to discern trends in the costs of generation from Hawaiian Electric-owned units and from PPAs.[19] For each of the Companies, since 2020, the cost of generation from PPAs has been reliably lower than the cost of central generation, as shown below in Figure 14, Figure 15, and Figure 16. .

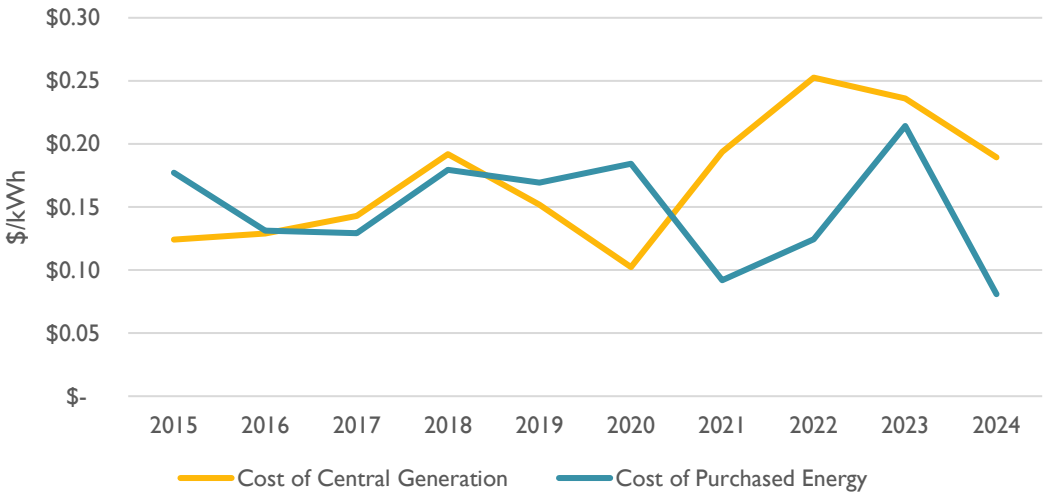
Figure 14. Cost of Generation from HECO and PPAs (2015-2024)



Source: Synapse Energy Economics, based upon data from HECO's Monthly ECRC filings for December of each year

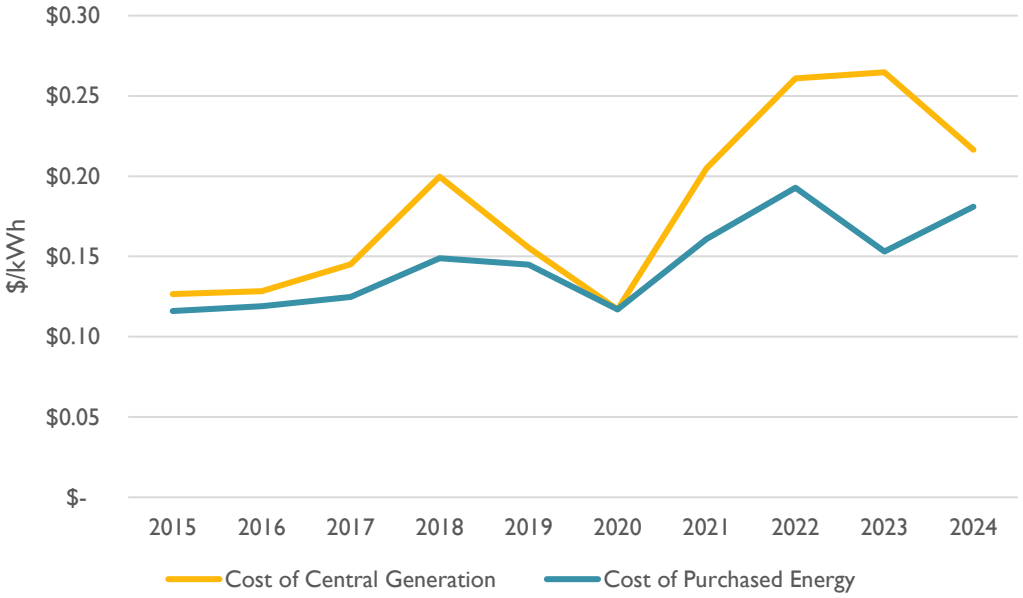
[19] The ECRC replaced the ECAC in 2019.

Figure 15. Cost of Generation from MECO and PPAs (2015-2024)



Source: Synapse Energy Economics, based upon data from MECO's Monthly ECRC filings for December of each year

Figure 16. Cost of Generation from HELCO and PPAs (2015-2024)



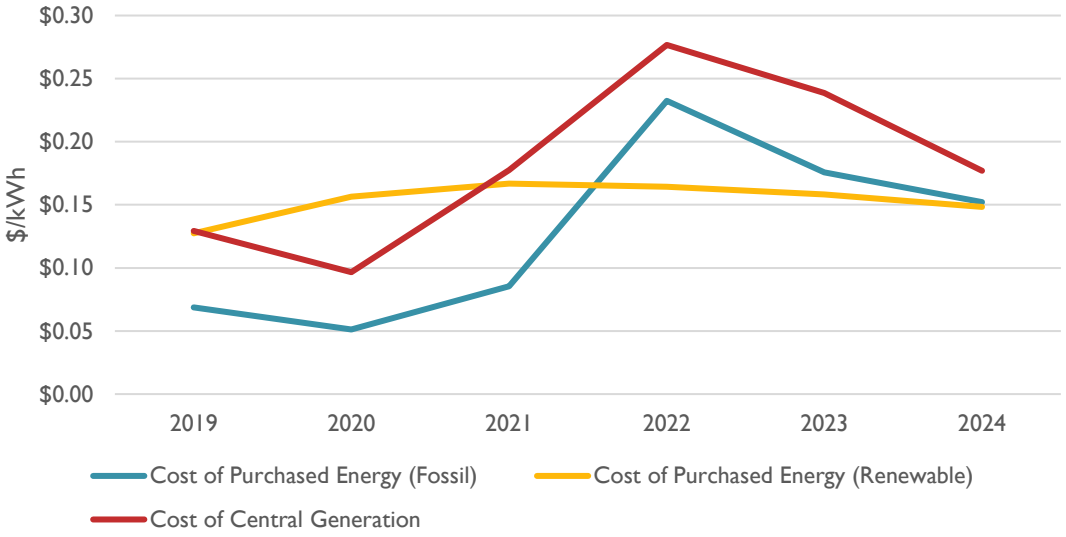
Source: Synapse Energy Economics, based upon data from HELCO's Monthly ECRC filings for December of each year

Purchased power costs are further disaggregated into fossil generation PPA costs and renewable generation PPA costs for HECO in Figure 17 and for HELCO in Figure 18. For MECO, no disaggregation is necessary since all purchased power is from renewable facilities. Data is only presented from 2019 to 2024; prior to 2019, the Companies' ECAC filings did not separately present composite costs for fossil

PPAs and renewable PPAs. For reference, the cost of the Companies' central generation is also presented.

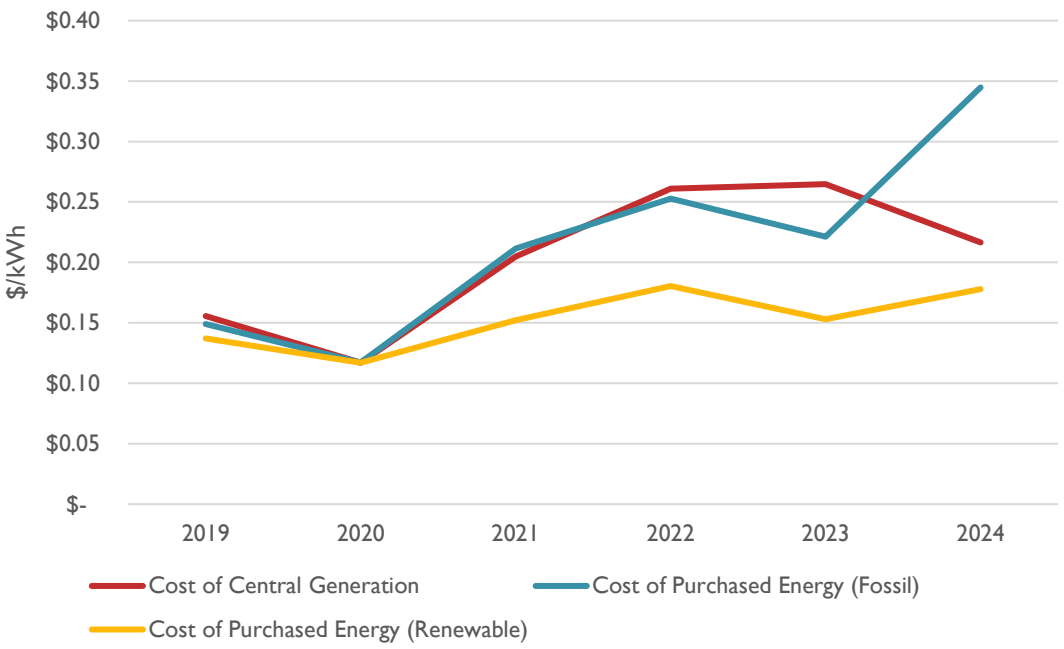
These figures illustrate that the costs of purchased power from renewable facilities have been relatively stable and less expensive than the cost of central generation. For HELCO, renewable PPAs have also been notably less expensive that PPAs from fossil fuel powered facilities since 2020.

Figure 17. Cost of Renewable and Fossil Purchased Power Compared with Cost of HECO's Central Generation (2019-2024)



Source: Synapse Energy Economics, based upon data from HECO's Monthly ECRC filings for December of each year

Figure 18. Cost of Renewable and Fossil Purchased Power Compared with Cost of HELCO's Central Generation (2019-2024)



Source: Synapse Energy Economics, based upon data from HELCO's Monthly ECRC filings for December of each year

2.8. Renewable Integration and Underlying Incentives

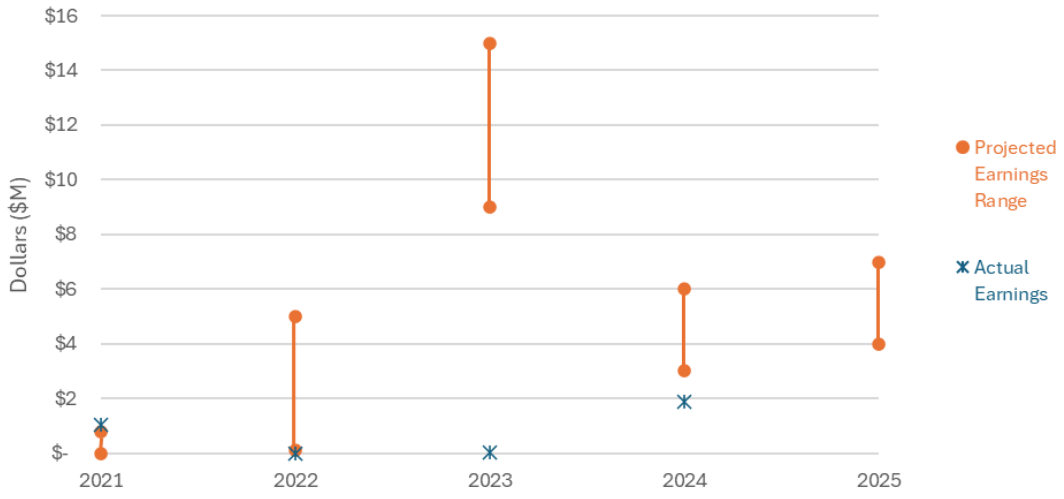
The Renewable Energy page on the metrics dashboard shows numerous metrics that track the integration and performance of renewables. There is a suite of incentive mechanisms currently in place that should steer the Company toward adoption of renewables. Key mechanisms include the RPS-A PIM, the CSSM, and the ECRC fossil fuel risk sharing component. Also, the Companies should be further induced to transition away from reliance on their own fossil generation units to achieve savings in ARA-funding O&M expenditures that may then be retained. It appears that these mechanisms may be performing as designed to induce a swifter transition to renewables than would otherwise have occurred, though this effect appears to be modest. These mechanisms are discussed below.

RPS-A PIM

The RPS-A PIM has been in effect since 2021. The Companies claimed earnings of $1M in 2021, $0 in 2022, $0.4M in 2023, and $1.9M in 2024.[20] These actual, realized incentives are far lower than the Companies' projections (Figure 19).

[20] Annual Reports.

Figure 19. RPS-A PIM Projected and Actual Incentives



Source: Synapse Energy Economics adapted from Annual Reports, Company presentations, and Spring Templates

- In a presentation from early 2021, the Companies projected that they would earn between $0 and $0.8M on this PIM in 2021, between $0.1M and $5M in 2022, and between $7M and $14M in 2023.[21]
- In November 2021, the Companies provided an updated forecast for RPS-A earnings, with the most significant change to the earlier forecast discussed above being an upward revision in the projected RPS-A earnings for 2023 to between $9M and $15M.[22]
- In a November 2022 presentation, 2024 RPS-A earnings were forecast at between $5M and $8M.[23]
- In a March 2023 presentation, the 2024 RPS-A earnings projection was reduced to between $3M and $6M, while the projection for 2025 was put forward as $4M to $7M.[24]

The record of the Companies' forecasts for RPS-A incentive earnings suggests that the mechanism may in fact be driving the Companies to expedite renewable integration, but the Companies have not succeeded thus far in reaching their ambitious renewable goals.

[21] Hawaiian Electric Industries, Inc., Presentation on 4th Quarter & Full Year Financial Results; 2021 Outlook. February 16, 2021.

[22] Hawaiian Electric Industries, Inc., Presentation to EEI Financial Conference. November 2021.

[23] Hawaiian Electric Industries, Inc., Investor Presentation. November 2022.

[24] Hawaiian Electric Industries, Inc., Investor Presentation. March 2023.

ECRC Fossil Fuel Risk Sharing Mechanism

The fossil fuel risk sharing component of the ECRC provides a relatively minor incentive to control fossil fuel costs – through opportunistic purchasing, efficient operation of the Companies' own fossil units, and reduced reliance on fossil generation. However, since risk sharing is set to just 2-percent of overage/underage relative to target, it likely provides little inducement to change behavior. Furthermore, the Companies have historically taken the position that this risk sharing is inequitable since it may penalize the Companies for outcomes that are outside of their control.

Fossil fuel risk sharing outcomes have been very noisy since this mechanism was implemented, as shown below for Hawaiian Electric, Maui Electric, and Hawaii Electric Light in Table 1. Negative values (in parentheses) indicate an incentive paid to the Companies.

Table 1. Fossil Fuel Risk Sharing Results for the Companies (2019-2024)

	2019	2020	2021	2022	2023	2024
Hawaiian Electric	($602,496)	($1,598,846)	$2,500,000	$2,500,000	($2,500,000)	($1,511,063)
Maui Electric	($11,665)	($453,850)	$570,000	$570,000	($175,538)	($127,562)
Hawaii Electric Light	n/a	n/a	$347,852	$551,589	$2,312	($285,462)

Source: Synapse Energy Economics, based upon data from the Companies' monthly energy cost filings for December of each year. 2024 risk sharing values for Hawaiian Electric found on page 4, line 118D; Maui Electric page 5, line 96; Hawaii Electric Light page 4, line 118.

Further, the amount of money at stake in the ECRC Risk Sharing Mechanism was less than half of that of the RPS-A PIM during this period, suggesting that it might be less effective at incentivizing reduction in fuel costs.

CSSM

The CSSM aims to induce the Companies to restrain spending on non-ARA cost categories – namely, fossil fuels, purchased power, and EPRM. This mechanism has only been in effect since 2023. The Companies achieved no savings relative to the target level in this first year and therefore earned no incentive.[25] Hawaii Electric Light earned $2.8 million from the CSSM.[26]

[25] 2024 Spring Report.

[26] 2025 Spring Report.

ARA

As discussed previously, the MRP's revenue formula (ARA) may induce the Companies to transition away from reliance on their own fossil generation units to achieve savings on O&M that may then be retained. To date, there is no evidence that this incentive has functioned in this way – the Companies' O&M spending has increased at an increasing level during the first PBR period, and utilization of the Companies' own fossil fleet has increased. There are other confounding factors in the mix, however, so it is difficult to draw inferences about how well the ARA revenue formula is functioning to incentivize the shift away from fossil generation.

2.9. Summary of Key Findings

In recent years, the Companies' rates have risen and fuel costs were a primary driver of the increases. While the implementation of PBR aims to induce the Companies to cost effectively transition away from reliance on fossil generation, which could reduce upward pressure on rates, this has not occurred at significant scale yet for Hawaiian Electric. On Oahu, the share of IPP generation from renewables has increased markedly with the closure of the AES coal facility and the addition of additional third-party renewable capacity, but there is still heavy reliance on Hawaiian Electric's central fossil generation. Though generation from PPAs has been reliably less expensive than generation from Hawaiian Electric's own units, there has been a relative lack of this more cost-effective generation in the overall generation mix.

There are several mechanisms that should incentivize the Companies to seek to transition away from reliance on their own fossil units, including the RPS-A PIM, the ECRC fossil fuel risk sharing mechanism, the CSSM, and the overall ARA framework. They appear to have had only a modest effect in promoting an increase in renewable generation:

- The Companies have consistently ended up short of their forecasts for RPS-A earnings. This is likely due to global supply chain challenges in obtaining renewable generation equipment.
- The Companies have alternatively been penalized and rewarded under the ECRC risk sharing mechanism. This is primarily due fluctuations in fossil fuel prices rather than the reduction in generation efficiency at the Companies' own units.
- In 2023, the first year of CSSM, the Companies earned no CSSM incentive. In 2024, Hawaii Electric Light earned $2.8 million from the CSSM, which appears to be a result of savings on IPP energy costs in the performance year relative to the base year.[27]
- The Companies' O&M spending has increased in recent years. Apparently, the potential to reduce O&M costs has not provided sufficient incentive to encourage further transition to renewable generation.

[27] HAWAII ELECTRIC LIGHT-WP-E-series PIM SSM, tab "WP-E8-001-CSSM"

3. RELIABILITY PERFORMANCE

3.1. Introduction

Reliability is key performance area for the Companies, and *maintaining* reliability is a major concern within the PBR framework. Four of the thirteen PIMs in the Companies' current portfolio are tied to reliability metrics: respectively, SAIDI and SAIFI for the transmission and distribution system, and SAIDI and SAIFI associated with generation.

The Companies track normalized values of SAIDI and SAIFI that exclude data points from major event days, as well as non-normalized values of SAIDI and SAIFI.[28] Comprehensive reporting on reliability is made through the annual service quality filings, however the data and graphs in section 3.2 reflect SAIDI and SAIFI values reported to the PUC through the PBR scorecards. The following section looks at reliability performance for the years 2015 to 2024 (note: higher SAIDI and SAIFI values indicate worse performance).

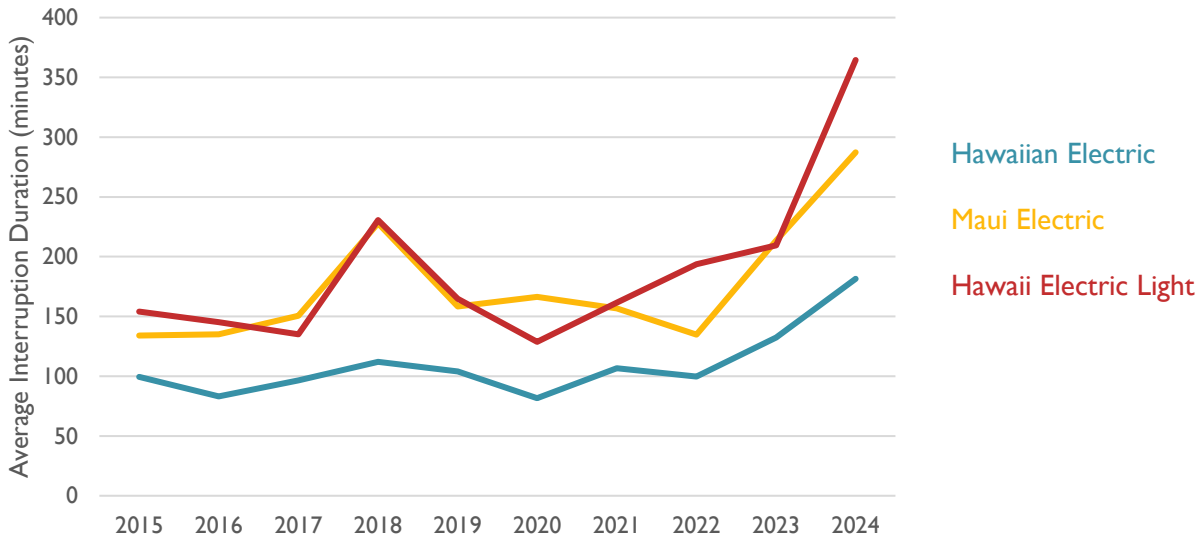
3.2. Transmission and Distribution Reliability

T&D SAIDI

The Transmission and Distribution System Average Interruption Duration Index (SAIDI) metric measures the amount of time an average customer is without service over the course of the year. The Companies track normalized and non-normalized data – where normalized data excludes performance during major event days. As shown in Figure 20, normalized values of SAIDI have fluctuated significantly since 2015, with overall worsening performance across all Companies over this period. SAIDI values for Hawaiian Electric post-PBR (2021-2024) were on average 35 percent higher than its pre-PBR values (2015-2020), Maui Electric's SAIDI values were 22 percent higher post-PBR; and Hawaii Electric Light's values were 45 percent higher post-PBR. Predictably, non-normalized SAIDI values are significantly higher than normalized values in some years (for example, non-normalized SAIDI for Maui Electric reached 2,500 minutes as a result of the wildfires on Maui in 2023).

[28] These nonnormalized metrics may also be considered as indicators of resiliency.

Figure 20. T&D System Average Interruption Duration Index



Source: Synapse Energy Economics, based upon data from the Companies' Annual Service Quality Reports.

Each Company has occasionally received penalties for insufficient performance on the T&D SAIDI PIM, as shown below in Table 2.

Table 2. T&D SAIDI PIM Penalties

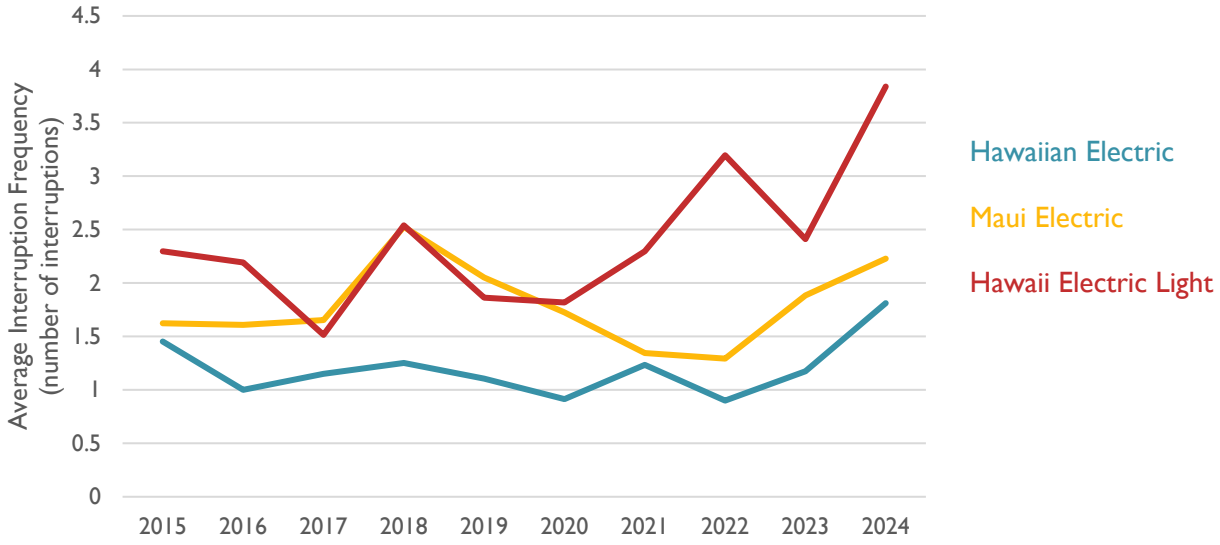
Company	**2021**	**2022**	**2023**	**2024**	**Total (2021-2024)**
Hawaiian Electric	None	None	-$2,278,410	-$1,001,338	-$3,279,748
Maui Electric	-$181,520	None	-$310,868	None	-$492,388
Hawaii Electric Light	None	-$78,821	-$547,930	None	-$626,751

Source: Spring Reports

T&D SAIFI

The Transmission and Distribution System Average Interruption Frequency Index (SAIFI) metric indicates how many times an average customer on the system experiences an outage over the course of a year. Normalized SAIFI performance has remained stable since 2015 for Hawaiian Electric and Maui Electric, staying below two interruptions per customer every year on average (Figure 21); however, both Companies have worsened since 2022. Hawaii Electric Light's normalized SAIFI performance has worsened more significantly since 2021, reaching almost 4 interruptions per customer in 2024. Like for SAIDI, non-normalized SAIFI values are higher than normalized values.

Figure 21. T&D System Average Interruption Frequency Index



Source: Synapse Energy Economics, based upon data from the Companies' Annual Service Quality Reports.

The Companies have received few penalties for their performance on T&D SAIFI, as shown below in Table 3.

Table 3. T&D SAIFI PIM Penalties

Company	**2021**	**2022**	**2023**	**2024**	**Total (2021-2024)**
Hawaiian Electric	None	None	None	None	None
Maui Electric	None	None	None	None	None
Hawaii Electric Light	None	None	-$585,404	None	-$585,404

Source: Spring Reports

3.3. Generation Reliability

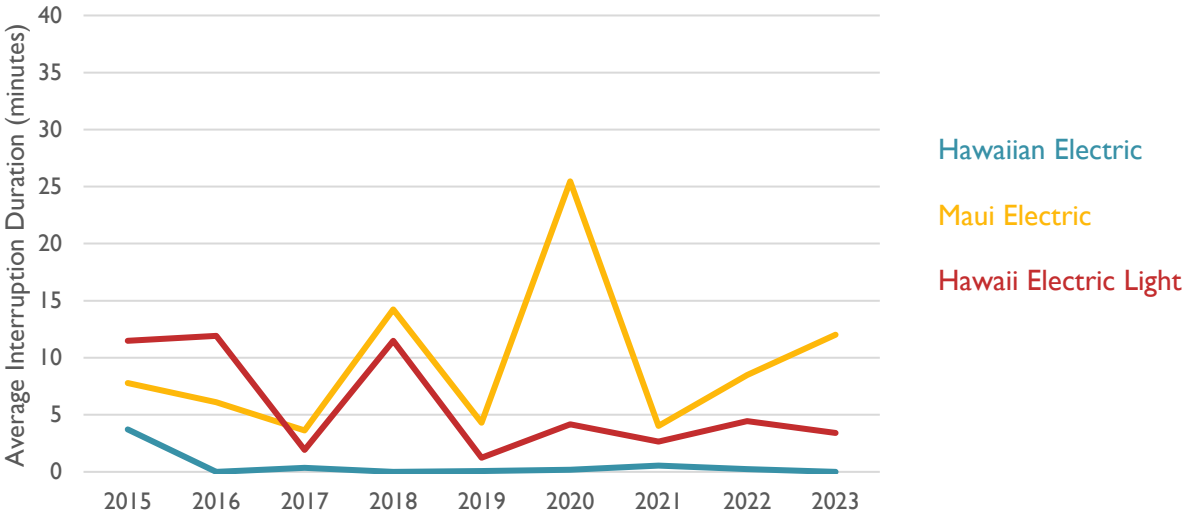
PIMs for generation SAIDI and SAIFI commenced in 2023. Like the T&D SAIDI and SAIFI PIMs, the generation PIMs result in financial penalties when the Companies perform below target levels. No penalties were imposed for generation SAIDI and SAIFI during the first year of activation for this PIM,

although in 2024 Hawaii Electric Light received a penalty of $91,117.[29] Since 2015, generation SAIDI has worsened for Maui Electric, improved for Hawaii Electric Light, and remained stable for Hawaiian Electric. Generation SAIFI has remained relatively stable for all Companies.

Generation SAIDI

This metric tracks the average interruption duration for utility-operated generation. Figure 22 shows normalized generation SAIDI values for all three Companies. Hawaiian Electric has the lowest normalized SAIDI values and the most stable performance from 2015 to 2023. Hawaii Electric Light has the next best SAIDI performance, with some fluctuation in early years but stable performance around three minutes from 2019. Maui Electric's SAIDI performance has fluctuated significantly, reaching 25 minutes in 2020, followed by some improvement in 2021 before worsening again in 2022 and 2023.

Figure 22. Generation System Average Interruption Duration Index



Source: Synapse Energy Economics, based upon data from the Companies' Annual Service Quality Reports.

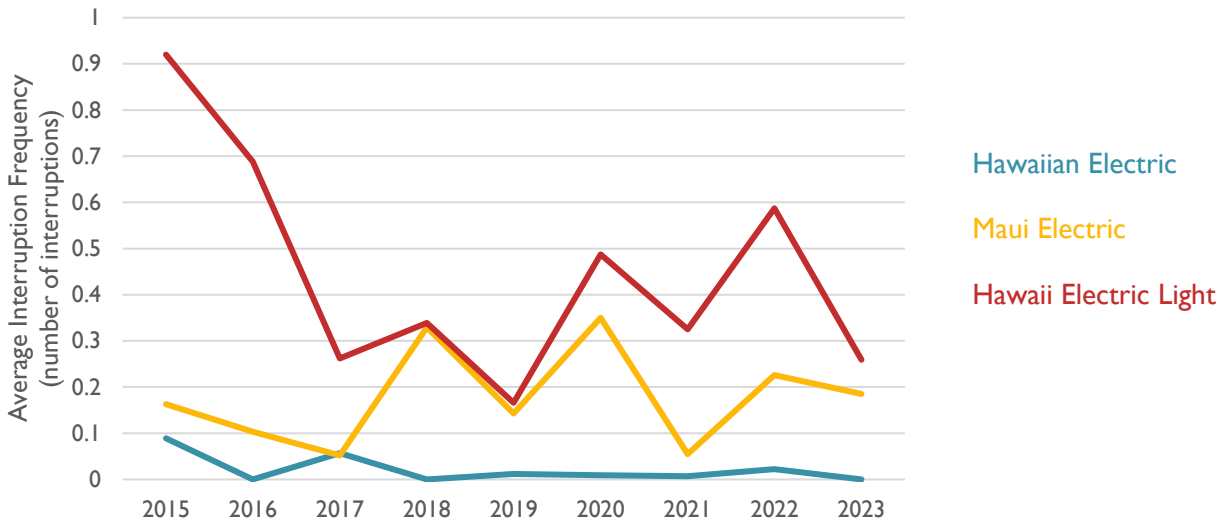
Generation SAIFI

This metric tracks the average frequency of Company-owned generation interruptions over the course of the year. Hawaiian Electric has the lowest SAIFI values and most stable performance of all the Companies across both its normalized and non-normalized generation SAIFI performance. Maui Electric's performance has fluctuated from 2015 to 2023, with small peaks in 2018, 2020, and 2022. Maui Electric's non-normalized values were the same as its normalized values until 2021. In 2022, Maui Electric's non-normalized SAIFI reached 0.5 interruptions – the same year that Maui Electric experienced a peak in its non-normalized SAIDI values. Hawaii Electric Light consistently has had the highest SAIFI

[29] Hawaii Electric Light's 2025 Spring Report

values of all the Companies, with peaks in 2015 and 2022. Hawaii Electric Light's normalized values were the same as its non-normalized values from 2015 to 2023.

Figure 23. Generation System Average Interruption Frequency Index



Source: Synapse Energy Economics, based upon data from the Companies' Annual Service Quality Reports.

3.4. Summary of Key Findings

The Companies' reliability record has been mixed since 2015. Though there have been some periods of improvement in T&D reliability, performance has worsened over all since 2021. Generation reliability has fluctuated significantly since 2015 for Maui Electric and Hawaii Electric Light with no dominant trends, while the Companies' performance has remained stable with relatively fewer interruptions and shorter outage durations over the past ten years.

4. SAFETY PERFORMANCE

Currently there are no PIMs related to safety and only limited metrics. On the Company's website, there are only three metrics related to safety. The first two are related specifically to employee safety, and the third is related to public safety. However, none of these metrics meaningfully address the risk to the public from the Companies' operations. This small number of safety-related metrics, and their limited scope, are insufficient to adequately evaluate the implications of PBR and cost cutting on the Companies' safety performance. Brief recaps of these metrics are provided below:

- The Total Case Incident Rate (TCIR) metric measures how many work-related injuries and illnesses occur per 100 employees. In 2016, Maui saw the lowest TCIR of any area since 2014 at 0.67. In 2022, Hawaii Island saw the highest TCIR by far with 6.87. In most years the TCIR values

for each service territory are roughly between 1.5 and 2.5. All Companies experienced above average TCIR in 2022, returning to average or lower-than-average levels in 2023 and 2024.

- The Lost Time Rate (LTR) metric measures any occupational injury or illness which results in an employee being unable to work a full assigned work shift after an incident per 100 employees. It is calculated by multiplying the number of cases by 200,000 productive hours (i.e. 2,000 work-hours per year per employee multiplied by 100 employees) divided by the total number of productive hours for the year (per OSHA standards). There is not a noticeable trend, nor a notable difference in performance among the Companies' territories. There was a spike in 2022 in each territory, reaching 6.49 in Maui County. Average annual LTRs fall between 0.5 and 1.25. All Companies experienced below average LTR values in 2023, returning to average in 2024.

- The Total Public Safety Incidents metric counts the number of public safety incidents. The Company website only presents aggregated data for the Companies (not differentiated by utility territory or island), and only on a quarterly basis. The number of Total Public Safety Incidents is zero every quarter shown except for Q2 2024, where there was 1 incident.

Notwithstanding the limits of the existing safety metrics regime, there are indications of deficient safety performance, including the 2023 Maui wildfires[30] and the 2024 underground fires in Honolulu.[31] Further investigation is required to determine the cause of any performance deficiencies.

[30] See PUC Wildfire Investigation, Case no. 2024-01872.

[31] See Consumer Advocacy – Public Utilities (DCA) | HECO Power Outage – Chinatown 6/20.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **DIVISION OF CONSUMER ADVOCACY'S STATEMENT OF POSITION** was duly served upon the following parties electronically to the e-mail addresses below pursuant to HAR § 16-601-21(d), as modified by Order No. 38270 Setting Forth Public Utilities Commission Electronic Filing and Service Procedures, filed on March 14, 2022.

JOSEPH P. VIOLA, ESQ.
VICE PRESIDENT, REGULATORY AFFAIRS
DEAN K. MATSUURA
DIRECTOR, REGULATORY RATE PROCEEDINGS
HAWAIIAN ELECTRIC COMPANY, INC.
P. O. Box 2750
Honolulu, HI 96840-0001
Emails: joseph.viola@hawaiianelectric.com
dean.matsuura@hawaiianelectric.com
tyler.oya@hawaiianelectric.com
regulatory@hawaiianelectric.com

MARIE O'GRADY
INTERIM DIRECTOR
BLUE PLANET FOUNDATION
55 Merchant Street, 17th Floor
Honolulu, HI 96813
Email: marie@blueplanetfoundation.org

ISAAC H. MORIWAKE
KYLIE W. WAGER CRUZ
EARTHJUSTICE
850 Richards Street, Suite 400
Honolulu, HI 96813
Emails: imoriwake@earthjustice.org
kwager@earthjustice.org

Attorneys for BLUE PLANET FOUNDATION

DUANE W. H. PANG
ACTING FIRST DEPUTY CORPORATION COUNSEL
MELE COLEMAN
DEPUTY CORPORATION COUNSEL
CITY AND COUNTY OF HONOLULU
530 South King Street, Room 110
Honolulu, HI 96813
Emails: cor@honolulu.gov
dpang1@honolulu.gov
eyarbrough@honolulu.gov
mele.coleman@honolulu.gov

Attorneys for CITY AND COUNTY OF HONOLULU

JOSEPH K. KAMELAMELA
CORPORATION COUNSEL
MALIA A. KEKAI
DEPUTY CORPORATION COUNSEL
COUNTY OF HAWAIʻI
101 Aupuni Street, Suite 325
Hilo, HI 96720
Emails: joe.kamelamela@hawaiicounty.gov
malia.kekai@hawaiicounty.gov

Attorneys for COUNTY OF HAWAII

ELIZABETH STRANCE
MALIA KEKAI
COUNTY OF HAWAII
101 Aupuni Street, Suite 325
Hilo, HI 96720
Emails: malia.kekai@hawaiicounty.gov
kris.mayes@asu.edu
katharine.batten@asu.edu

Attorneys for COUNTY OF HAWAII

BEREN ARGETSINGER
TIM LINDL
KEYES & FOX LLP
P. O. Box 166
Burdett, NY 14818
Emails: bargetsinger@keyesfox.com
tlindl@keyesfox.com
steven.rymsha@sunrun.com

Attorneys for HAWAII PV COALITION

ROBERT R. MOULD
HAWAII SOLAR ENERGY ASSOCIATION
P. O. Box 37070
Honolulu, HI 96817
Email: rmould@hsea.org

HENRY Q CURTIS
VICE PRESIDENT FOR CONSUMER ISSUES
LIFE OF THE LAND
P. O. Box 37158
Honolulu, HI 96837-0158
Email: henry.lifeoftheland@gmail.com

DOUGLAS A. CODIGA, ESQ.
MARK F. ITO, ESQ.
SCHLACK ITO
A Limited Liability Law Companies
Topa Financial Center
745 Fort Street, Suite 1500
Honolulu, HI 96813
Emails: dcodiga@schlackito.com
mito@schlackito.com

Attorneys for ULUPONO INITIATIVE LLC

HANNAH POLIKOV
SENIOR DIRECTOR
COLEY GIROUARD
SENIOR ASSOCIATE
ADVANCED ENERGY ECONOMY
1000 Vermont Ave., 3rd Floor
Washington, DC 20005
Emails: hpolikov@aee.net
cgirouard@aee.net

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/s/ S. Strack